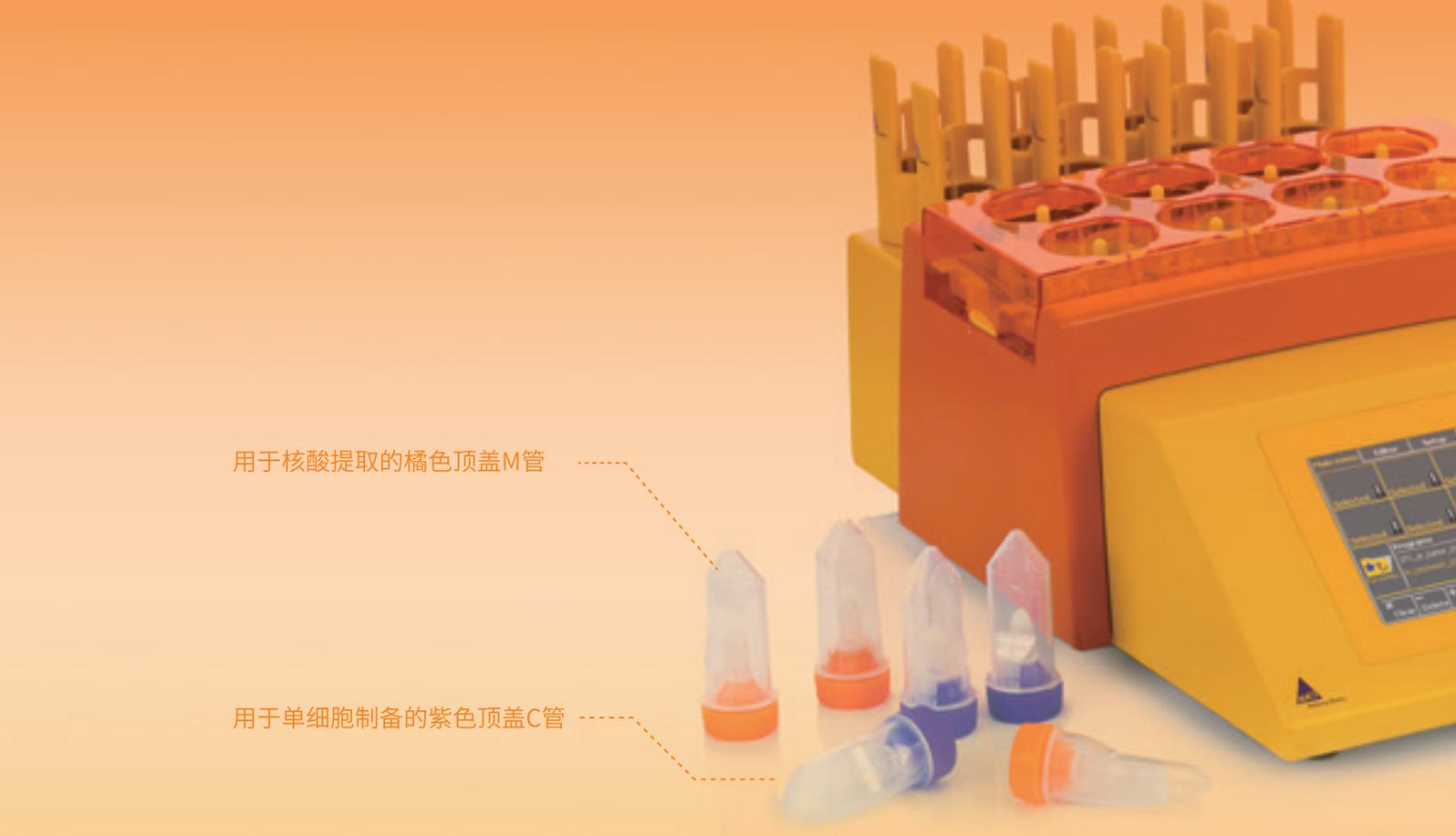




Miltenyi Biotec

# 美天旌gentleMACS™组织解离技术应用指南





用于核酸提取的橘色顶盖M管

用于单细胞制备的紫色顶盖C管

## 高质量组织单细胞悬液制备最佳方案

成功的实验依赖于高质量的起始实验材料，这在基于组织单细胞悬液的研究中更为突出。

美天旎的 gentleMACS™ 样本制备技术由 gentleMACS 组织解离器、专利的 gentleMACS 样品管和 组织特异性解离试剂盒系列共同组成，满足无菌且全封闭的样本制备要求，带来样品和操作人员双重安全保障。

gentleMACS 组织解离器内预设的经验证运行程序结合优化的酶制剂配方致力于温和、高效且高度标准化的组织解离。

gentleMACS  
组织解离器

专利的  
gentleMACS  
样品管

组织特异性  
解离试剂盒  
系列

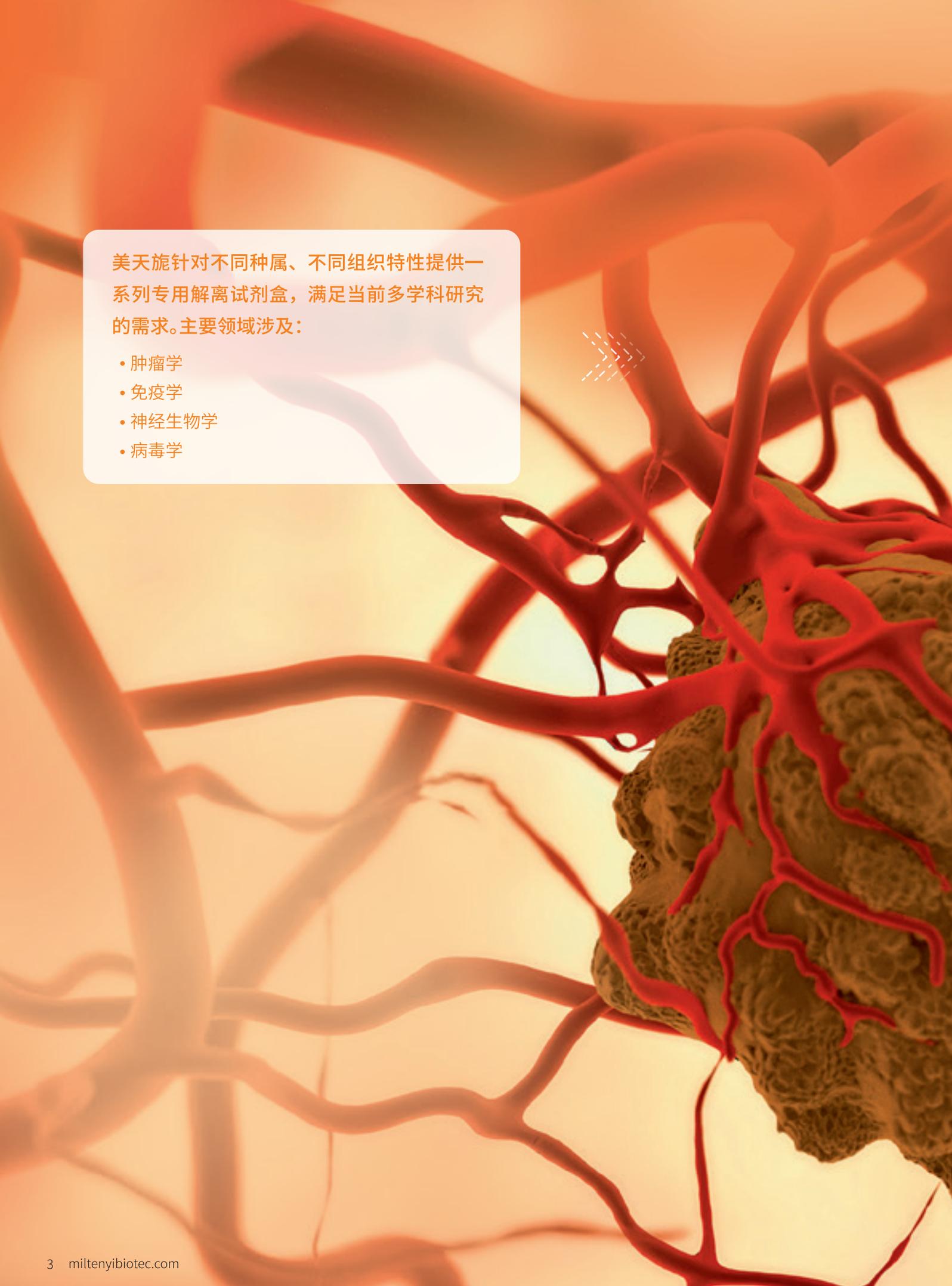


gentleMACS™ 组织解离系列产品可用于多种应用

搭配紫色顶盖的C管

搭配橘色顶盖的M管





美天旎针对不同种属、不同组织特性提供一系列专用解离试剂盒，满足当前多学科研究的需求。主要领域涉及：

- 肿瘤学
- 免疫学
- 神经生物学
- 病毒学



# 肿瘤学

美天旎为人和小鼠来源肿瘤组织提供专用的肿瘤组织解离试剂盒，满足临床肿瘤学和肿瘤免疫学基础研究的需求。两款试剂盒均极温和且高效，在实现高效肿瘤单细胞制备的同时，充分保证了内部肿瘤浸润白细胞表面抗原信息的有效维持，为肿瘤浸润白细胞表型多样性分析、体外扩增提供有利工具。为肿瘤微环境、肿瘤异质性研究提供有力的方法学支持。

## 人来源肿瘤组织样品

人肿瘤解离试剂盒 **Tumor Dissociation Kit, human(130-095-929)** 带来省时高效优质的人实体肿瘤组织单细胞悬液制备，满足肿瘤细胞及肿瘤浸润白细胞的下游研究。该试剂盒对常见的超过200种细胞表面抗原进行内部验证，超过96%的表面抗原不受任何影响。面向用户的细胞表面抗原维持信息详见附表1，为用户进行复杂人来源组织解离实验探索提供便捷。

支持原发肿瘤、肿瘤转移灶、肿瘤活组织检验样本、人肿瘤异种植物（PDX）等多种形式肿瘤样本，在多种组织来源肿瘤得到验证：

|  |   |  |
|--|---|--|
| <b>皮肤癌</b><br>黑色素瘤    | <b>乳腺</b><br>乳腺癌   | <b>头颈部肿瘤</b><br>胶质瘤  头颈部鳞状细胞癌 <br>髓母细胞瘤  喉咽癌   |
| <b>生殖器官肿瘤</b><br>卵巢癌 <br>前列腺癌  | <b>淋巴系统肿瘤</b><br>T 细胞淋巴瘤 <br>pDC 淋巴瘤  | <b>内脏肿瘤</b><br>肺癌  肾癌  直肠癌 <br>胰腺癌  肝癌  |

解离后的肿瘤单细胞悬液可采用下列磁珠产品进行浸润白细胞富集或肿瘤细胞的纯化。

### 肿瘤浸润白细胞专用分选磁珠：

- CD45(TIL)MicroBeads, human( 130-118-780)
- REAlease CD3 (TIL) MicroBeads, human( 130-121-562)
- REAlease CD4 (TIL) MicroBeads, human (130-121-559)
- REAlease CD8 (TIL) MicroBeads, human (130-121-560)

### 肿瘤细胞纯化富集：

- Tumour cell isolation kit, human(130-108-339)
- Mouse cell depletion kit(130-104-694)

 原发肿瘤     异种植物     肿瘤转移灶

另有专为恶性脑瘤组织解离提供的脑肿瘤解离试剂盒，专为胶质母细胞瘤、成神经细胞瘤、髓母细胞瘤等恶性脑瘤及其异种植物提供组织解离。

|       |   |  |
|-------|---|--|
| 人脑部肿瘤 | Brain Tumor Dissociation kit<br>130-095-942 | 遵循解离试剂盒说明书指导，启动 gentleMACS™ Octo 组织解离器内预置程序完成解离。 |
|-------|---|--|

美天旎提供用于小鼠肿瘤组织解离的试剂盒,满足基于肿瘤模型小鼠的研究应用需求。

## 小鼠来源肿瘤组织样本

小鼠肿瘤试剂盒 Tumor Dissociation Kit, mouse (130-096-730)为基于小鼠的肿瘤异质性及肿瘤微环境研究提供了优质的解离方案。同样,在保证高效肿瘤实体解离的同时,有效维持肿瘤浸润白细胞表面抗原信息。

美天旎Tumor Dissociation Kit, mouse对常见的超过200种细胞表面抗原可能存在的影响进行内部验证,并提供面向用户的细胞表面抗原维持信息,详见附件2。

| 荷瘤小鼠的肿瘤组织   | 小鼠脑瘤组织  |
|---|---|
| <p>省时高效优质的小鼠肿瘤组织单细胞悬液制备,满足肿瘤细胞及肿瘤浸润白细胞的下游研究。</p> <p>在多种基因工程诱导或基于细胞系及同系肿瘤小鼠的肿瘤类型上得到验证,包括:</p> <ul style="list-style-type: none"> <li>骨肉瘤 <span style="color: purple;">■</span> <span style="color: green;">■</span></li> <li>黑色素瘤 <span style="color: purple;">■</span></li> <li>乳腺肿瘤 <span style="color: blue;">■</span> <span style="color: purple;">■</span> <span style="color: green;">■</span></li> <li>肺癌 <span style="color: purple;">■</span></li> <li>直肠癌 <span style="color: blue;">■</span> <span style="color: purple;">■</span> <span style="color: green;">■</span></li> </ul> <div style="text-align: right; margin-top: 10px;"> <span style="color: blue;">■</span> 原发肿瘤<br/> <span style="color: purple;">■</span> 肿瘤细胞系诱导肿瘤<br/> <span style="color: green;">■</span> 基因诱导肿瘤         </div> | <p>用于基因工程诱导或基于细胞系及肿瘤异种移植建立的小鼠脑瘤组织单细胞制备,可用于脑瘤组织内肿瘤细胞的研究。</p> |
| <p>Tumour Dissociation kit, mouse<br/>130-096-730</p>   | <p>Brain Tumour Dissociation kit<br/>130-095-942</p>        |
| <p>解离后的肿瘤单细胞悬液可采用下列磁珠产品进行浸润白细胞富集或肿瘤细胞的纯化。</p> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <p><b>肿瘤浸润白细胞分选:</b></p> <ul style="list-style-type: none"> <li>● CD45(TIL)MicroBeads, mouse( 130-110-618)</li> <li>● CD4/CD8 (TIL)MicroBeads, mouse( 130-116-480)</li> </ul> </div> <div style="width: 45%;"> <p><b>肿瘤细胞纯化富集:</b></p> <ul style="list-style-type: none"> <li>● Tumour cell isolation kit, mouse(130-110-187)</li> </ul> </div> </div>   |   |

# 免疫学

多种免疫器官及组织的最优化解离方案为免疫学研究提供可靠的起始材料。美天旋针对啮齿动物脾脏、肺、肝、脂肪、小肠固有层、淋巴结等多种富含免疫细胞的组织提供优化解离方案，有效获取免疫细胞的同时，也可用于非免疫细胞类群的分离富集。

| 组织来源 |   | 推荐试剂盒  | 应用概述  |
|------|---|--|---|
| 脾脏   | <p>作为机体最大的淋巴器官，脾脏在引发针对血液内出现的抗原的免疫反应、滤除受损血细胞中发挥重要作用。脾脏白髓内含大量淋巴细胞、巨噬细胞、树突状细胞及浆细胞。</p> <p>本试剂盒适用于小鼠脾脏单细胞悬液制备后对免疫细胞特别是树突状细胞的获取。</p> | Spleen Dissociation Kit, mouse<br>130-095-926  | <p>遵循解离试剂盒说明书指导，启动 gentleMACS™ Octo 组织解离器内预置程序完成解离。</p> <p>解离后需使用 70 μm 孔径的细胞滤器进行过滤(130-098-462)。</p>   |
| 淋巴结  | <p>淋巴结是遍布于全身淋巴系统的卵圆形器官，主要由皮质、副皮质区和髓质三大组成结构构成，富含大量淋巴细胞和树突状细胞。</p> <p>本解离方案适用于小鼠淋巴结单细胞悬液制备后对免疫细胞的获取。</p>                          | Spleen Dissociation Kit, mouse<br>130-095-926  | <p>遵循解离试剂盒说明书指导，启动 gentleMACS™ Octo 组织解离器内预置程序完成解离。</p> <p>解离后需使用 100 μm 孔径的细胞滤器进行过滤(130-098-463)。</p>  |
| 肺脏   | <p>用于针对小鼠肺部免疫细胞、内皮细胞的分离及相关研究的肺部解离。不能获得肺泡细胞。</p>   | Lung dissociation kit, mouse<br>130-095-927    | <p>遵循解离试剂盒说明书指导，启动 gentleMACS™ Octo 组织解离器内预置程序完成解离。</p> <p>若进行肺部树突状细胞的分离，建议搭配采用：CD11c MicroBeads UltraPure, mouse (130-125-835)</p> <p>用于肺部内皮细胞的分离：<br/>CD146 (LSEC) MicroBeads Lung Endothelial Cell Isolation Kit, rat(130-109-680)</p> |
|      | <p>用于大鼠肺部免疫细胞、内皮细胞的分离及相关研究的肺部解离。不能获得肺泡细胞</p>  | Multi Tissue Dissociation Kit 2<br>130-110-203 | <p>参看网站资源满足大鼠肺脏解离的特殊实验方案"Dissociation of rat lung using Multi Tissue Dissociation Kit 2"</p>  |

# 免疫学

| 组织来源 |   | 推荐试剂盒  | 应用概述   |
|------|---|--|--|
| 肝脏   | <p>用于肝脏内免疫细胞、肝窦内皮细胞、星状细胞及 Kupffer 细胞等非实质细胞的分离和研究。</p> <p>不能获得肝实质细胞。</p>   | Liver dissociation kit, mouse<br>130-105-807   | <p>遵循解离试剂盒说明书指导,启动 gentleMACS™ Octo 组织解离器内预置程序完成解离。</p> <p>若进行肝窦内皮细胞的分离,建议搭配采用: CD146 MicroBeads, mouse (130-092-007)</p>              |
| 肠道   | <p>专为小鼠肠道固有层免疫细胞(如固有免疫细胞、调节性 T 细胞、树突状细胞等)的分离和获取提供最佳的组织解离。</p>   | Lamina Propria Dissociation Kit, mouse<br>130-097-410  | <p>遵循解离试剂盒说明书指导,启动 gentleMACS™ Octo 组织解离器内预置程序完成解离。</p>  |
| 皮肤   | <p>用于小鼠表皮组织的解离,特别是表皮内朗格汉斯细胞的分离和研究</p>   | Epidermis Dissociation Kit<br>130-095-928  | <p>遵循解离试剂盒说明书指导,启动 gentleMACS™ Octo 组织解离器内预置程序完成解离。</p> <p>若进行朗格汉斯细胞分离,建议搭配: Epidermal Langerhans Cell MicroBead Kit (130-095-408)</p> |
|      | <p>用于小鼠全皮肤组织内获取包括 T、DC、巨噬细胞等多种免疫细胞的全皮肤组织解离</p>  | Multi Tissue Dissociation Kit 1<br>130-110-201   | <p>参看网站资源满足小鼠皮肤解离的特殊实验方案 "Dissociation of mouse ear using the Multi Tissue Dissociation Kit 1"</p>                                     |
|      | <p>从人表皮(活组织检验)样本中分离皮肤角质细胞的组织解离方案。</p> <p>从人全皮肤(活组织检验)样本中分离成纤维细胞的组织解离方案。</p>   | <p>Epidermis Dissociation Kit, human<br/>130-103-464</p> <p>Whole Skin Dissociation Kit, human<br/>130-101-540</p> | <p>遵循解离试剂盒说明书指导,启动 gentleMACS™ Octo 组织解离器内预置程序完成解离。</p>  |
| 脂肪   | <p>脂肪内存在大量免疫细胞的浸润,如 T 细胞、巨噬细胞、中性粒细胞等,参与脂肪功能及整体代谢的调节。</p> <p>本试剂盒为从大鼠或小鼠腹股沟、腋部或内脏脂肪等来源的干细胞、前体细胞、免疫细胞或间质细胞的富集提供的脂肪组织解离方案。</p> <p>无法用于脂肪细胞的获取。</p> | Adipose Dissociation kit, mouse and rat<br>130-105-808   | <p>遵循解离试剂盒说明书指导,启动 gentleMACS™ Octo 组织解离器内预置程序完成解离。</p>  |

## 🧠 神经生物学

啮齿动物神经组织为神经生物学研究的重要研究工具。美天旎神经组织解离试剂系列为成年鼠脑单细胞测序、神经拟胚体形成、多种神经细胞的体外培养及其他种属神经研究提供便捷可靠的方案。

|                             |   |   |   |
|-----------------------------|---|---|---|
|                             | <p>用于成年大鼠或小鼠全脑组织的单细胞悬液制备，可支持脑内所有神经及非神经细胞的分离。</p>  | <p>Adult Brain Dissociation kit, mouse and rat<br/>130-107-677</p>  | <p>试剂盒内包含红细胞和碎片去除相关试剂。<br/>如需进行成年神经元富集，建议搭配 Adult neuron isolation kit, mouse 130-126-603</p>   |
| <p>全脑</p>                   | <p>用于脑组织内神经干细胞及前体细胞分离的胚胎小鼠或大鼠脑组织解离。两种酶制剂配方，用于维持不同抗原表位信息的需求。</p>                           | <p>Neural Tissue Dissociation Kit (T)<br/>130-093-231<br/><br/>Neural Tissue Dissociation Kit (P)<br/>130-092-628</p> | <p>如需采用如下磁珠进行小胶质细胞或神经前体细胞的分选，建议采用 Neural Tissue Dissociation Kit (P)</p> <ul style="list-style-type: none"> <li>小胶质细胞分选：<br/>CD11b MicroBeads, human and mouse (130-093-634)<br/>CD11b/c MicroBeads, rat (130-105-634)</li> <li>用于人和小鼠神经前体细胞分选：<br/>Anti-Prominin-1 MicroBeads</li> <li>用于人、大鼠和小鼠胶质前体细胞分选：<br/>Anti-A2B5 MicroBeads, human, mouse and rat (130-093-388)</li> </ul> <p>如需采用如下磁珠进行星形胶质细胞或神经前体细胞的分选，建议采用 Neural Tissue Dissociation Kit (T)：</p> <ul style="list-style-type: none"> <li>星形胶质细胞分选：<br/>Anti-GLAST(ACSA-1) MicroBeads, human, mouse and rat (130-095-826)</li> <li>神经前体细胞分选：<br/>Anti-PSA-NCAM MicroBeads, human, mouse and rat (130-092-966)</li> </ul> |
| <p>神经炎症<br/>小鼠脑<br/>和脊髓</p> | <p>用于分离实验性自身免疫性脑脊髓炎 (EAE) 模型小鼠或其他神经炎症小鼠脑内浸润免疫细胞分离的脑、脊髓组织解离，可获取 T 细胞、B 细胞、巨噬细胞等多种免疫细胞。</p> | <p>Multi Tissue Dissociation Kit 1<br/>130-110-201</p>  | <p>参见网站资源专为满足神经炎症模型动物神经组织解离的特殊实验方案 Dissociation of inflamed neural tissue using the Multi Tissue Dissociation Kit 1</p>   |
| <p>视网膜</p>                  | <p>适用于针对大鼠视网膜神经节神经元 (RGC) 与穆勒细胞富集的视网膜解离。<br/>该试剂盒也可用于大鼠全脑的解离。</p>                         | <p>Neural Tissue Dissociation Kit-Postnatal Neurons<br/>130-094-802</p>   | <p>遵循解离试剂盒说明书指导，启动 gentleMACS™ Octo 组织解离器内预置程序完成解离。</p>   |
| <p>神经球</p>                  | <p>专为原代神经干细胞体外培养形成的神经球进行单细胞解离而研发，不影响细胞的多能性和扩增能力。</p>                                      | <p>Neurosphere Dissociation Kit (P)<br/>130-095-943</p>   | <p>遵循解离试剂盒说明书指导，启动 gentleMACS™ Octo 组织解离器内预置程序完成解离。</p>   |

## 其他组织类型的解离方案

|     |   |   |   |
|-----|---|---|---|
| 心脏  | 为从新生小鼠或大鼠 (P0-3) 心脏中分离可搏动心肌细胞用于体外培养, 甚至用于构建组织工程心脏而特别优化的温和解离试剂盒, 同样可支持心脏内皮细胞、心脏前体细胞、心脏成纤维细胞等多种细胞的分离。 | Neonatal Heart Dissociation Kit, mouse and rat<br>130-098-373 | 遵循解离试剂盒说明书指导, 启动 gentleMACS™ Octo 组织解离器内预置程序完成解离。解离后需进行细胞过滤: <ul style="list-style-type: none"> <li>• 小鼠心脏采用 70 μm 孔径的细胞滤器</li> <li>• 大鼠心脏采用 100 μm 孔径的细胞滤器</li> </ul> 进行如下类型细胞的分离, 建议采用如下搭配: <ul style="list-style-type: none"> <li>• 新生心肌细胞:<br/>Neonatal Cardiomyocyte Isolation Kit, mouse (130-100-825)<br/>Neonatal Cardiomyocyte Isolation Kit, rat (130-105-420)</li> <li>• 分离新生心脏成纤维细胞:<br/>Neonatal Cardiac Fibroblast Isolation Kit, rat (130-105-422)</li> <li>• 分离新生心脏内皮细胞:<br/>Neonatal Cardiac Endothelial Cell Isolation Kit, mouse (130-104-183)<br/>Neonatal Cardiac Endothelial Cell Isolation Kit, rat (130-106-768)</li> </ul> |
|     | 可从成年小鼠心脏中分离心脏成纤维细胞或内皮细胞等非心肌细胞的分离。   | Multi Tissue Dissociation Kit 2<br>130-110-203                | 参看网站资源专为满足成年小鼠心脏解离优化的特殊实验方案 "Dissociation of adult mouse heart using the Multi Tissue Dissociation Kit 2"   |
|     | 可从成年大鼠心脏中分离心脏成纤维细胞或内皮细胞等非心肌细胞的分离。   | Multi Tissue Dissociation Kit 2<br>130-110-203                | 参看网站资源专为满足成年大鼠心脏解离优化的特殊实验方案 "Dissociation of adult rat heart using the Multi Tissue Dissociation Kit 2"   |
| 前列腺 | 用于小鼠前列腺组织单细胞悬液制备。   | Multi Tissue Dissociation Kit 1<br>130-110-201                | 参看网站资源专为小鼠前列腺解离优化的特殊实验方案 "Dissociation of mouse prostate using the Multi Tissue Dissociation Kit 1" 组织解离后红细胞含量较高, 建议采用 Red Blood Cell Lysis Solution (130-094-183) 去除红细胞  |
| 肾脏  | 用于人肾脏组织单细胞悬液的制备   | Multi Tissue Dissociation Kit 1<br>130-110-201                | 参看网站资源专为人肾脏解离优化的特殊实验方案 "Dissociation of human kidney using the Multi Tissue Dissociation Kit 1" 肾脏含有较多血细胞, 可采用 Red Blood Cell Lysis Solution (10×) (130-094-183) 进行去除。  |
|     | 用于小鼠肾脏组织单细胞悬液制备, 该方法解离后可能对下列表面抗原存在降低影响: CD8a, CD19, CD45R (B220), CD25, CD44, CD69, NK1.1, Ter119   | Multi Tissue Dissociation Kit 2<br>130-110-203                | 参看网站资源专为小鼠肾脏解离优化的特殊实验方案 "Dissociation of mouse kidney using the Multi Tissue Dissociation Kit 2"  |

|      |   |  |  |
|------|---|--|--|
| 肌肉   | <p>用于大鼠或小鼠骨骼肌组织的解离，可获得如星状细胞、肌细胞等多种骨骼肌内存在的细胞类型。</p> <p>不能用于成熟肌小管的获取。</p> | <p>Skeletal Muscle Dissociation Kit, mouse and rat<br/>130-098-305</p> | <p>遵循解离试剂盒说明书指导，启动 gentleMACS™ Octo 组织解离器内预置程序完成解离。</p> <p>如需进行星状细胞的分离，可搭配 Satellite Cell Isolation Kit, mouse (130-104-268)</p> |
| 小鼠胚胎 | <p>用于高质量、高得率的胚胎成纤维细胞 (MEF) 制备的小鼠胚胎解离</p>                                | <p>Multi Tissue Dissociation Kit 3<br/>130-110-204</p>                 | <p>参看网站资源为分离胚胎小鼠成纤维细胞特殊优化的实验方案 "Dissociation of mouse embryo using the Multi Tissue Dissociation Kit 3"</p>                      |

**附表1 人肿瘤解离试剂盒细胞表面抗原保留验证信息**

**验证方法**

肿瘤细胞系与人PBMC混合后使用Tumor Dissociation Kit 试剂盒内酶制剂在37 °C条件下进行总共一小时的酶解反应。反应结束后对需要进行验证的表面抗原使用相应流式抗体标记并进行流式分析，结果与使用缓冲液孵育的对照组进行比对，如出现抗原信号降低，则认为试剂盒对该抗原存在影响。

**Results**

| Antibody detecting cell surface epitope | Antibody clone | Antibody detecting cell surface epitope | Antibody clone | Antibody detecting cell surface epitope | Antibody clone | Antibody detecting cell surface epitope | Antibody clone |
|---|----------------|---|----------------|---|----------------|---|----------------|
| Anti-CLA                                | HECA-452       | Anti-LGR5                               | DA03-22H2.8    | CD4                                     | VIT4           | CD27                                    | M-T271         |
| Anti-CLIP                               | REA296         | Anti-MICA/MICB                          | 6D4            | CD5                                     | UCHT2          | CD28                                    | 15E8           |
| Anti-CX3CR1                             | 2A9-1          | Anti-NKp80                              | 4A4.D10        | CD6                                     | M-T411         | CD29                                    | TS2/16         |
| Anti-DCIR                               | REA329         | Anti-Notch2                             | MHN2-25        | CD8                                     | BW135/80       | CD31                                    | AC128          |
| Anti-DLL1                               | MHD1-314       | Anti-PTK7 (CCK-4)                       | 188B           | CD9                                     | SN4 C3-3A2     | CD32                                    | 2E1            |
| Anti-DR-3                               | JD3            | Anti-ROR-1                              | 2A2            | CD10                                    | 97C5           | CD33                                    | AC104.3E3      |
| Anti-FcεR1α                             | CRA1           | Anti-SSEA-1                             | REA321         | CD11a (ITGAL)                           | REA378         | CD35                                    | E11            |
| Anti-Fibroblast                         | REA165         | Anti-SSEA-4                             | REA101         | CD11b                                   | M1/70.15.11.5  | CD36                                    | AC106          |
| Anti-fMLP receptor                      | REA169         | Anti-TCR-Vα7.2                          | REA179         | CD11c                                   | MJ4-27G12      | CD38                                    | IB6            |
| Anti-Galectin-3                         | M3/38          | Anti-TCR-Vδ1                            | REA173         | CD13                                    | REA263         | CD39                                    | MZ18-23C8      |
| Anti-HLA Class I B8                     | REA145         | Anti-TCR-Vδ2                            | 123R3          | CD14                                    | TÜK4           | CD40                                    | HB14           |
| Anti-HLA Class I Bw6                    | REA143         | Anti-TCRα/β                             | BW242/412      | CD15                                    | VIMC6          | CD41b                                   | REA336         |
| Anti-HLA-ABC                            | REA230         | Anti-TCRγ/δ                             | 11F2           | CD16                                    | VEP13          | CD42a                                   | REA209         |
| Anti-HLA-B12                            | REA138         | Anti-TSPAN8                             | REA443         | CD18                                    | TS1/18         | CD43                                    | DF-T1          |
| Anti-HLA-DQ                             | REA303         | CD1a                                    | HI149          | CD19                                    | LT19           | CD44                                    | DB105          |
| Anti-HLA-DR                             | AC122          | CD1c (BDCA-1)                           | AD5-8E7        | CD20                                    | LT20           | CD45                                    | 5B1            |
| Anti-HLA-DR, DP, DQ                     | REA332         | CD1d                                    | 51,1           | CD21                                    | HB5            | CD45RA                                  | T6D11          |
| Anti-HLA-E                              | 3D12           | CD2                                     | LT2            | CD22                                    | REA340         | CD45RB                                  | REA119         |
| Anti-Jagged2                            | MHJ2-523       | CD3                                     | BW264/56       | CD24                                    | 32D12          | CD45RO                                  | UCHL1          |
| Anti-KLRG1                              | REA261         | CD4                                     | M-T466         | CD25                                    | 4E3            | CD46                                    | REA312         |
| CD47                                    | REA220         | CD90                                    | DG3            | CD158b (KIR2DL2/DL3)                    | DX27           | CD240DCE                                | REA327         |
| CD49a                                   | TS2/7          | CD95 (FAS)                              | DX2            | CD158e (KIR3DL1)                        | DX9            | CD244 (2B4)                             | REA112         |
| CD49b                                   | REA188         | CD96 (TACTILE)                          | REA195         | CD158e/k                                | 5.133          | CD258 (LIGHT)                           | REA244         |
| CD49d                                   | MZ18-24A9      | CD97                                    | VIM3b          | CD161                                   | 191B8          | CD262                                   | DJR2-4         |
| CD49e                                   | NKI-SAM1       | CD99                                    | 3B2/TA8        | CD162                                   | REA319         | CD266 (FN14)                            | ITEM-4         |
| CD49f                                   | GoH3           | CD101                                   | BB27           | CD163                                   | GHI/61.1       | CD268                                   | 11C1           |
| CD51                                    | REA181         | CD103                                   | Ber-ACT 8      | CD171 (LICAM)                           | REA163         | CD270 (HVEM)                            | REA247         |
| CD52                                    | REA164         | CD104 (Integrin β4)                     | REA236         | CD172a (SIRPα)                          | REA144         | CD271 (LNGFR)                           | ME20.4-1.H4    |
| CD53                                    | REA259         | CD105                                   | 43A4E1         | CD172b                                  | B4B6           | CD276                                   | FM276          |
| CD54 (ICAM-1)                           | REA266         | CD106 (VCAM-1)                          | REA269         | CD177                                   | REA258         | CD282 (TLR2)                            | REA109         |
| CD55 (DAF)                              | JS11           | CD107a (LAMP-1)                         | H4A3           | CD180 (RP105)                           | MHR73-11       | CD284                                   | HTA125         |
| CD56                                    | AF12-7H3       | CD107b                                  | H4B4           | CD181 (CXCR1)                           | 8F1            | CD294                                   | BM16           |

| Antibody detecting cell surface epitope | Antibody clone | Antibody detecting cell surface epitope | Antibody clone | Antibody detecting cell surface epitope | Antibody clone | Antibody detecting cell surface epitope | Antibody clone |
|---|----------------|---|----------------|---|----------------|---|----------------|
| CD57                                    | TB03           | CD111                                   | R1.302         | CD182 (CXCR2)                           | REA208         | CD298                                   | REA217         |
| CD58 (LFA-3)                            | TS2/9          | CD116                                   | REA211         | CD184                                   | 12G5           | CD300e (IREM-2)                         | UP-H2          |
| CD61                                    | Y2/51          | CD119                                   | REA161         | CD185 (CXCR5)                           | REA103         | CD300f (IREM-1)                         | UP-D2          |
| CD62E (E-Selectin)                      | REA280         | CD122 (IL-2Rβ)                          | REA167         | CD192 (CCR2)                            | REA264         | CD303 (BDCA-2)                          | AC144          |
| CD62P                                   | REA389         | CD123                                   | AC145          | CD193 (CCR3)                            | 5E8.4          | CD312 (EMR2)                            | REA302         |
| CD63                                    | H5C6           | CD127                                   | MB15-18C9      | CD194 (CCR4)                            | REA279         | CD314 (NKG2D)                           | BAT221         |
| CD64                                    | 10.1.1         | CD132                                   | REA313         | CD196 (CCR6)                            | REA190         | CD317 (PDCA-1)                          | REA202         |
| CD66abce                                | TET2           | CD133/1                                 | AC133          | CD197 (CCR7)                            | FR 11-11E8     | CD318 (CDCP1)                           | REA194         |
| CD66b                                   | REA306         | CD133/2                                 | 293C3          | CD197 (CCR7)                            | REA546         | CD324 (E-Cadherin)                      | 67A4           |
| CD66c                                   | REA414         | CD137L (4-1BBL)                         | REA254         | CD200                                   | OX-104         | CD326 (EpCAM)                           | HEA-125        |
| CD68                                    | Y1/82A         | CD138                                   | REA104         | CD202b (TIE-2)                          | REA198         | CD328 (Siglec-7)                        | REA214         |
| CD71                                    | AC102          | CD138                                   | B-B4           | CD205 (DEC205)                          | HD30           | CD337 (NKp30)                           | AF29-4D12      |
| CD72                                    | REA231         | CD140b                                  | REA363         | CD208 (DC-LAMP)                         | REA295         | CD352                                   | REA339         |
| CD73                                    | AD2            | CD141 (BDCA-3)                          | AD5-14H12      | CD209 (DC-SIGN)                         | DCN47.5        | CD354 (TREM-1)                          | REA213         |
| CD74                                    | 5-329          | CD142                                   | HTF-1          | CD217 (IL-17RA)                         | REA290         | DCIR                                    | REA329         |
| CD79a                                   | HM47           | CD144 (VE-Cadherin)                     | REA199         | CD218 (IL-18Ra)                         | H44            |   |                |
| CD82                                    | REA221         | CD146                                   | 541-10B2       | CD220                                   | REA260         |   |                |
| CD84                                    | MZ18-21F6      | CD147                                   | REA282         | CD221 (IGF-1R)                          | REA271         |   |                |
| CD85a (ILT5)                            | REA207         | CD148                                   | REA204         | CD222                                   | REA187         |   |                |
| CD85j (ILT2)                            | GHI/75         | CD151                                   | REA265         | CD226 (DNAM-1)                          | DX11           |   |                |
| CD85k (ILT3)                            | REA141         | CD156a (ADAM8)                          | REA331         | CD229 (Ly-9)                            | Hly9.1.25      |   |                |
| CD87                                    | VIM5           | CD156c (ADAM10)                         | REA309         | CD230 (PrP)                             | REA203         |   |                |
| CD88 (CSAR)                             | S5/1           | CD158a (KIR2DL1)                        | REA284         | CD235a (Glycophorin A)                  | REA175         |   |                |
| CD89                                    | REA234         | CD158a/h (KIR2DL1/DS1)                  | 11PB6          | CD239 (BCAM)                            | REA276         |   |                |

**Legend**  
■ Stable  
■ Moderate sensitivity\*  
■ Strong sensitivity\*

**Table 1:** Stability of cell surface epitopes towards treatment with the Tumor Dissociation Kit, human.

\* Adjusting the concentration of one of the kit components (enzymes) can aid in preserving sensitive epitopes. For more information please contact us.

附表2小鼠肿瘤解离试剂盒细胞表面抗原保留验证信息

### 验证方法

小鼠肺组织和脾脏组织分别在无酶制剂的条件下进行解离，解离后与小鼠外周血及肿瘤细胞系(4T1, CT26.WT and B16-F10)进行混合，混合物分为两组：一组使用小鼠肿瘤解离试剂盒在37 °C 下进行40分钟孵育酶解，另一组使用缓冲液孵育。反应结束后对需要进行验证的表面抗原使用相应流式抗体标记并进行流式分析，结果与使用缓冲液孵育的对照组进行比对，如出现抗原信号降低，则认为试剂盒对该抗原存在影响。

## Results

| Antibody detecting cell surface epitope | Antibody clone | Antibody detecting cell surface epitope | Antibody clone | Antibody detecting cell surface epitope | Antibody clone | Antibody detecting cell surface epitope | Antibody clone |
|---|----------------|---|----------------|---|----------------|---|----------------|
| anti-A2B5                               | 105HB29        | anti-H60a                               | REA556         | anti-Ly-49                              | REA241         | anti-PSA-NCAM                           | 2-2B           |
| anti-B7-H4                              | REA392         | anti-IgD                                | 11-26c.2a      | anti-Ly-6B.2                            | REA115         | anti-QA-1B                              | 6A8.6F10.1A6   |
| anti-BP-1                               | 6C3            | anti-IgDa                               | REA484         | anti-Ly-6C                              | 1G7.G10        | anti-QA-2                               | REA523         |
| anti-ChemR23                            | REA461         | anti-IgG2ab                             | X-57           | anti-Ly-6G                              | REA526         | anti-Rae-1a/b/g                         | REA578         |
| anti-DCIR2                              | 33D1           | anti-IgM                                | X-54           | anti-MDL-1                              | REA582         | anti-Sca-1                              | REA422         |
| anti-Dectin-1                           | REA154         | anti-Integrin α7                        | 3C12           | anti-Mer                                | REA477         | anti-Siglec F                           | ES22-10D8      |
| anti-Embigin                            | REA501         | anti-Integrin β7                        | REA441         | anti-MHC-II                             | M5/114.15.2    | anti-Siglec H                           | 551.3D3        |
| anti-EphA2                              | REA579         | anti-IFN-γR β                           | REA381         | anti-MHC-II I-Ab                        | REA528         | anti-Syndecan 4                         | REA640         |
| anti-F4/80                              | REA126         | anti-Jagged 2                           | HMJ2-1         | anti-MHC-II I-Ak                        | REA610         | anti-TCR β                              | REA318         |
| anti-FcR Ia                             | MAR-1          | anti-KLRG1                              | 2F1            | anti-MHC-II I-Ek                        | REA510         | anti-TCR γδ                             | GL3            |
| Anti-Feeder Cells                       | mEF-SK4        | anti-LGR5                               | DA04-10E8.9    | anti-Nk1.1                              | PK136          | anti-TCR Va3.2 (b,c)                    | REA395         |
| anti-FR-4                               | TH6            | anti-LPAM-1                             | REA457         | anti-Notch1                             | REA357         | anti-TCR Vβ11                           | REA657         |
| anti-Galectin-3                         | M3/38          | anti-LT-βR                              | REA416         | anti-Notch2                             | HMN2-35        | anti-TCR Vβ14                           | REA645         |
| anti-GARP                               | REA139         | anti-Ly-49C/F/I/H                       | 14B11          | anti-Notch4                             | HMN4-14        | anti-TCR Vβ8.1/8.2                      | REA585         |
| anti-GITR (CD357)                       | DTA-1          | anti-Ly49D                              | 4E5            | anti-O4                                 | O4             | anti-TCR Vδ4                            | REA372         |
| anti-GR-1                               | RB6-8C5        | anti-Ly-49E/F                           | REA218         | anti-PIR-A/B                            | REA472         | anti-Ter119                             | Ter-119        |
| anti-H2Kd/H2Dd                          | REA527         | anti-Ly-49G                             | AT-8           | anti-Plexin B2                          | REA445         | anti-TIGIT                              | REA536         |
| anti-H2Kk                               | H100-27.R55    | anti-Ly-49G2                            | 4D11           | anti-Prominin-1                         | MB9-3G8        | anti-Tim-3                              | RMT3-23        |
| anti-TIM-3                              | REA602         | CD45R                                   | RA3-6B2        | CD100                                   | REA322         | CD197                                   | 4B12           |
| anti-Tom22                              | 1C9-2          | CD45RA                                  | REA639         | CD101                                   | REA301         | CD199                                   | CW-1.2         |
| CD1d                                    | 1B1            | CD45RB                                  | C363-16A       | CD103                                   | 2E7            | CD201                                   | 1560           |
| CD2                                     | RM2-5          | CD47                                    | REA170         | CD104                                   | REA456         | CD204                                   | REA148         |
| CD3                                     | REA641         | CD48                                    | HM48-1         | CD105                                   | MJ7/18         | CD205 (DEC205)                          | NLDC-145       |
| CD3e                                    | REA606         | CD49a                                   | REA493         | CD106 (VCAM)                            | 429 (MVCAM.A)  | CD21/CD35                               | 7E9            |
| CD4                                     | REA604         | CD49b                                   | REA541         | CD107a (LAMP-1)                         | 1D4B           | CD229                                   | REA273         |
| CD5                                     | REA421         | CD49c                                   | 5H10-27        | CD107b                                  | M3/84          | CD244.1                                 | REA524         |

| Antibody detecting cell surface epitope | Antibody clone | Antibody detecting cell surface epitope | Antibody clone | Antibody detecting cell surface epitope | Antibody clone | Antibody detecting cell surface epitope | Antibody clone |
|---|----------------|---|----------------|---|----------------|---|----------------|
| CD6                                     | REA311         | CD49d                                   | R1-2           | CD117                                   | 3C11           | CD262                                   | MD5-1-3C2      |
| CD9                                     | MZ3            | CD49f                                   | REA518         | CD119                                   | REA189         | CD266                                   | ITEM-4         |
| CD8a                                    | REA601         | CD54                                    | REA171         | CD120b                                  | REA228         | CD270                                   | REA275         |
| CD8b                                    | H35-17.2       | CD55 (DAF)                              | REA300         | CD122 (IL-2Rβ)                          | TM-β1          | CD272                                   | REA224         |
| CD11b                                   | REA592         | CD59a                                   | REA287         | CD125 (IL-5Ra)                          | REA343         | CD278 (ICOS)                            | REA192         |
| CD11c                                   | N418           | CD61                                    | 2C9.G2(HMβ3-1) | CD126 (IL-6Ra)                          | REA620         | CD279 (PD1)                             | HA2-7B1        |
| CD16/CD32                               | REA377         | CD62E                                   | REA369         | CD127                                   | A7R 34         | CD282                                   | REA109         |
| CD18                                    | M18/2          | CD62L                                   | MEL14-H2.100   | CD131                                   | REA193         | CD284                                   | MTS510         |
| CD19                                    | 6D5            | CD62P                                   | REA344         | CD134 (OX40)                            | REA625         | CD300a                                  | REA573         |
| CD20                                    | REA294         | CD63                                    | REA563         | CD137L                                  | TKS-1          | CD301a                                  | REA581         |
| CD22                                    | Cy34.1         | CD66a                                   | REA410         | CD138                                   | REA104         | CD304 (BDCA-4)                          | REA380         |
| CD23                                    | B3B4           | CD69                                    | H1.2F3         | CD140b                                  | REA634         | CD307a                                  | REA566         |
| CD24                                    | M1/69          | CD71                                    | REA627         | CD146                                   | ME-9F1         | CD317 (PDCA-1)                          | JF05-1C2.4.1   |
| CD25                                    | REA568         | CD73                                    | TY/11.8        | CD150                                   | REA299         | CD326                                   | caa7-9G8       |
| CD26                                    | H194-112       | CD79b                                   | HM79-12        | CD151                                   | REA561         | CD335 (anti-NKp46)                      | 29A1.4.9       |
| CD27                                    | REA499         | CD80                                    | 16-10A1        | CD155                                   | REA519         | CD352                                   | 13G3           |
| CD29                                    | HMβ1-1         | CD81                                    | EAT2           | CD166                                   | REA370         | CD354                                   | REA191         |
| CD31                                    | 309            | CD84                                    | REA212         | CD171                                   | 555            | CD371                                   | REA594         |
| CD38                                    | REA616         | CD85k                                   | REA141         | CD180                                   | RP/14          | NKp46                                   | 29A1.4.9       |
| CD40                                    | FGK45.5        | CD86                                    | PO3.3          | CD183                                   | CXCR3-173      |   |                |
| CD41                                    | MWRReg30       | CD87                                    | REA630         | CD184                                   | REA107         |   |                |
| CD43                                    | REA364         | CD88 (C5AR)                             | 20/70          | CD185                                   | REA215         |   |                |
| CD44                                    | IM7.8.1        | CD90.2                                  | 30-H12         | CD192                                   | REA538         |   |                |
| CD45                                    | 30F11          | CD93                                    | REA298         | CD193 (CCR3)                            | REA122         |   |                |
| CD45.1                                  | A20            | CD94                                    | 18d3           | CD195                                   | REA354         |   |                |
| CD45.2                                  | 104-2          | CD95                                    | REA453         | CD196                                   | REA277         |   |                |

**Legend**

- Stable
- Moderate sensitivity\*
- Strong sensitivity\*

**Table 1:** Stability of cell surface epitopes towards treatment with the Tumor Dissociation Kit, mouse.

\*Adjusting the concentration of one of the kit components (enzymes) can aid in preserving sensitive epitopes. For more information please contact us.



为满足多种属多组织不同程度解离的实验需求，多组织解离试剂盒 (Multi Tissue Dissociation kit) 根据酶制剂消化剧烈程度增强，提供 1-3 号解离试剂盒。Multi Tissue Dissociation kit 1 和 2 提供面向客户的细胞表面抗原保留验证信息，适合于特殊组织类型解离实验的探索。

### 附表3 多组织解离试剂盒1 (Multi Tissue Dissociation kit 1) 细胞表面抗原保留验证信息

#### 验证方法

该试剂盒对小鼠组织细胞的验证方法是基于小鼠肺、脾或外周血，在 37 °C 条件下使用该试剂盒酶制剂进行 40 分钟的孵育酶解。对人组织的验证方法是基于人 PBMC，在 37 °C 条件下使用该试剂盒酶制剂进行总时长 1 小时的孵育酶解。

反应结束后对需要进行验证的表面抗原使用相应流式抗体标记并进行流式分析，结果与使用缓冲液孵育的对照组进行比对，如出现抗原信号降低，则认为试剂盒对该抗原存在影响。

## Results, mouse

| Antibody detecting cell surface epitope | Antibody clone | Antibody detecting cell surface epitope | Antibody clone | Antibody detecting cell surface epitope | Antibody clone | Antibody detecting cell surface epitope | Antibody clone |
|---|----------------|---|----------------|---|----------------|---|----------------|
| Anti-B7-H4                              | REA392         | Anti-H2Kd/H2Dd                          | REA527         | Anti-Ly49C/F/I/H                        | 14B11          | Anti-MHC-II I-Ek                        | REA510         |
| Anti-ChemR23                            | REA461         | Anti-H2Kk                               | H100-27.R55    | Anti-Ly49D                              | 4E5            | Anti-Nk1.1                              | PK136          |
| Anti-DCIR-2                             | 33D1           | Anti-H60a                               | REA556         | Anti-Ly49E/F                            | REA218         | Anti-NKp46                              | REA815         |
| Anti-Dectin-1                           | REA154         | Anti-IgD                                | 11-26c.2a      | Anti-Ly49G                              | AT-8           | Anti-Notch1                             | REA357         |
| Anti-Embigin                            | REA501         | Anti-IgDa                               | REA484         | Anti-Ly49G2                             | 4D11           | Anti-Notch 2                            | HMN2-35        |
| Anti-EphA2                              | REA579         | Anti-IgG2ab                             | X-57           | Anti-Ly49H                              | REA241         | Anti-Notch 4                            | HMN4-14        |
| Anti-F4/80                              | REA126         | Anti-IgM                                | X-54           | Anti-Ly-6G                              | REA526         | Anti-PIR-A/B                            | REA472         |
| Anti-FcR Ia                             | MAR-1          | Anti-Integrin α7                        | 3C12           | Anti-Ly6B.2                             | REA115         | Anti-Plexin B2                          | REA445         |
| Anti-feeder cells                       | mEF-SK4        | Anti-Integrin β7                        | REA441         | Anti-Ly6C                               | 1G7.G10        | Anti-Prominin-1                         | MB9-3G8        |
| Anti-FR-4                               | TH6            | Anti-Interferon-γR β                    | REA381         | Anti-MDL-1                              | REA582         | Anti-PSA-NCAM                           | 2-2B           |
| Anti-Galectin-3                         | M3/38          | Anti-Jagged 2                           | HMJ2-1         | Anti-Mer                                | REA477         | Anti-QA-1B                              | 6A8.6F10.1A6   |
| Anti-GARP                               | REA139         | Anti-KLRG-1                             | 2F1            | Anti-MHC-II                             | M5/114.15.2    | Anti-QA-2                               | REA523         |
| Anti-GITR (CD357)                       | DTA-1          | Anti-LPAM-1                             | REA457         | Anti-MHC-II I-Ab                        | REA528         | Anti-Rae-1a/b/g                         | REA578         |
| Anti-GR-1                               | RB6-8C5        | Anti-LT-βR                              | REA416         | Anti-MHC-II I-Ak                        | REA610         | Anti-Sca-1                              | REA422         |
| Anti-Siglec F                           | ES22-10D8      | CD26                                    | H194-112       | CD81                                    | EAT2           | CD166                                   | REA370         |
| Anti-Siglec H                           | 551.3D3        | CD27                                    | REA499         | CD84                                    | REA212         | CD171                                   | 555            |
| Anti-Syndecan 4                         | REA640         | CD29                                    | HMB1-1         | CD85k                                   | REA141         | CD180                                   | RP/14          |
| Anti-TCR β                              | REA318         | CD31                                    | 309            | CD86                                    | PO3.3          | CD183                                   | CXCR3-173      |
| Anti-TCR γ/δ                            | GL3            | CD38                                    | REA616         | CD87                                    | REA630         | CD184                                   | REA107         |
| Anti-TCR Va 3.2 (b,c)                   | REA395         | CD40                                    | FGK45.5        | CD88                                    | 20/70          | CD185                                   | REA215         |
| Anti-TCR Vβ11                           | REA657         | CD41                                    | MWReg30        | CD90.2                                  | 30-H12         | CD192                                   | REA538         |
| Anti-TCR Vβ8.1/8.2                      | REA585         | CD43                                    | REA364         | CD93                                    | REA298         | CD193                                   | REA122         |
| Anti-TCR Vβ14                           | REA645         | CD44                                    | IM7.8.1        | CD94                                    | 18d3           | CD195                                   | REA354         |
| Anti-TCR Vδ4                            | REA372         | CD45                                    | 30F11          | CD95                                    | REA453         | CD196                                   | REA277         |
| Anti-Ter119                             | Ter-119        | CD45.1                                  | A20            | CD100                                   | REA322         | CD197                                   | 4B12           |

## Results, mouse

| Antibody detecting cell surface epitope | Antibody clone | Antibody detecting cell surface epitope | Antibody clone  | Antibody detecting cell surface epitope | Antibody clone | Antibody detecting cell surface epitope | Antibody clone |
|---|----------------|---|-----------------|---|----------------|---|----------------|
| Anti-TIGIT                              | REA536         | CD45.2                                  | 104-2           | CD101                                   | REA301         | CD199                                   | CW-1.2         |
| Anti-Tim-3                              | RMT3-23        | CD45R                                   | RA3-6B2         | CD103                                   | 2E7            | CD201                                   | 1560           |
| Anti-TIM-3                              | REA602         | CD45RA                                  | REA639          | CD104                                   | REA456         | CD204                                   | REA148         |
| Anti-Tom22                              | 1C9-2          | CD45RB                                  | C363-16A        | CD105                                   | MJ7/18         | CD205                                   | NLDC-145       |
| CD1d                                    | 1B1            | CD47                                    | REA170          | CD106                                   | 429 (MVCAM.A)  | CD229                                   | REA273         |
| CD2                                     | RM2-5          | CD48                                    | HM48-1          | CD107a                                  | 1D4B           | CD244.1                                 | REA524         |
| CD3                                     | REA641         | CD49a                                   | REA493          | CD107b                                  | M3/84          | CD262                                   | MD5-1-3C2      |
| CD3e                                    | REA606         | CD49b                                   | REA541          | CD117                                   | 3C11           | CD266                                   | ITEM-4         |
| CD4                                     | REA604         | CD49d                                   | R1-2            | CD119                                   | REA189         | CD270                                   | REA275         |
| CD5                                     | REA421         | CD49c                                   | 5H10-27         | CD120b                                  | REA228         | CD272                                   | REA224         |
| CD6                                     | REA311         | CD49f                                   | REA518          | CD122                                   | TM-β1          | CD278                                   | REA192         |
| CD8a                                    | REA601         | CD54                                    | REA171          | CD125                                   | REA343         | CD279                                   | HA2-7B1        |
| CD8b                                    | H35-17.2       | CD55 (DAF)                              | REA300          | CD126                                   | D7715A7        | CD282                                   | REA109         |
| CD9                                     | MZ3            | CD59a                                   | REA287          | CD126                                   | REA620         | CD284                                   | MTS510         |
| CD11b                                   | REA592         | CD61                                    | 2C9.G2 (HMβ3-1) | CD127                                   | A7R 34         | CD300a                                  | REA573         |
| CD11c                                   | N418           | CD62E                                   | REA369          | CD131                                   | REA193         | CD301a                                  | REA581         |
| CD16/CD32                               | REA377         | CD62L                                   | MEL14-H2.100    | CD134                                   | REA625         | CD304                                   | REA380         |
| CD18                                    | M18/2          | CD62P                                   | REA344          | CD137L                                  | TKS-1          | CD307a                                  | REA566         |
| CD19                                    | 6D5            | CD63                                    | REA563          | CD138                                   | REA104         | CD317                                   | JF05-1C2.4.1   |
| CD20                                    | REA294         | CD66a                                   | REA410          | CD140b                                  | APB5           | CD326                                   | caa7-9G8       |
| CD21/CD35                               | 7E9            | CD69                                    | H1.2F3          | CD140b REA                              | REA634         | CD352                                   | 13G3           |
| CD22                                    | Cy34.1         | CD71                                    | REA627          | CD146                                   | ME-9F1         | CD354                                   | REA191         |
| CD23                                    | B3B4           | CD73                                    | TY/11.8         | CD150                                   | REA299         | CD371                                   | REA594         |
| CD24                                    | M1/69          | CD79b                                   | HM79-12         | CD151                                   | REA561         |   |                |
| CD25                                    | REA568         | CD80                                    | 16-10A1         | CD155                                   | REA519         |   |                |

## Results, human

| Antibody detecting cell surface epitope | Antibody clone | Antibody detecting cell surface epitope | Antibody clone | Antibody detecting cell surface epitope | Antibody clone | Antibody detecting cell surface epitope | Antibody clone |
|---|----------------|---|----------------|---|----------------|---|----------------|
| Anti-FcεRIα                             | CRA            | CD27                                    | M-T271         | CD73                                    | AD2            | CD171                                   | REA163         |
| Anti-Galectin-3                         | M3/38          | CD29                                    | TS2/16         | CD79b                                   | REA120         | CD180                                   | MHR73-11       |
| Anti-HLA-A/B/C                          | REA230         | CD31                                    | AC128          | CD80                                    | 2D10           | CD181                                   | 8F1            |
| Anti-HLA-DR/DQ/DP                       | REA332         | CD35                                    | E11            | CD81                                    | REA513         | CD184                                   | 12G5           |
| Anti-Jagged 2                           | MHJ2-523       | CD38                                    | IB6            | CD84                                    | MZ18-21F6      | CD185                                   | REA103         |
| Anti-KLRG-1                             | REA261         | CD40                                    | HB14           | CD85a (ILT5)                            | REA207         | CD192                                   | REA264         |
| Anti-Notch 2                            | MHN2-25        | CD41b                                   | REA336         | CD85j (ILT2)                            | GHI/75         | CD193                                   | 5E8.4          |
| Anti-TCR-Vα7.2                          | REA179         | CD43                                    | DF-T1          | CD85k                                   | REA141         | CD195                                   | REA245         |
| Anti-TCR-Vδ1                            | REA173         | CD44                                    | DB105          | CD87                                    | VIM5           | CD196                                   | REA190         |
| Anti-TCR-Vδ2                            | 123R3          | CD45                                    | 5B1            | CD88                                    | S5/1           | CD197                                   | FR 11-11E8     |
| Anti-TCRα/β                             | BW242/412      | CD45RA                                  | T6D11          | CD90                                    | DG3            | CD201                                   | REA337         |
| Anti-TCRγ/δ                             | 11F2           | CD45RB                                  | REA119         | CD93                                    | VIMD2          | CD205                                   | HD30           |
| Anti-Tom22                              | 1C9-2          | CD45R0                                  | UCHL1          | CD95                                    | DX2            | CD229                                   | Hly9.1.25      |
| CD1d                                    | 51,1           | CD47                                    | REA220         | CD101                                   | BB27           | CD244                                   | REA112         |
| CD2                                     | LT2            | CD48                                    | REA426         | CD103                                   | REA803         | CD262                                   | DJR2-4         |
| CD3                                     | BW264/56       | CD49a                                   | TS2/7          | CD104                                   | REA236         | CD266                                   | ITEM-4         |
| CD4                                     | VIT4           | CD49b                                   | REA188         | CD105                                   | 43A4E1         | CD270                                   | REA247         |
| CD5                                     | UCHT2          | CD49d                                   | MZ18-24A9      | CD106                                   | REA269         | CD282                                   | REA109         |
| CD6                                     | M-T411         | CD49e                                   | NKI-SAM1       | CD107a                                  | H4A3           | CD284                                   | HTA125         |
| CD8                                     | BW135/80       | CD49f                                   | GoH3           | CD117                                   | A3C6E2         | CD307a                                  | REA440         |
| CD9                                     | SN4 C3-3A2     | CD54                                    | REA266         | CD119                                   | REA161         | CD317                                   | REA202         |
| CD11b                                   | M1/70.15.11.5  | CD55 (DAF)                              | JS11           | CD120a                                  | REA252         | CD326                                   | HEA-125        |
| CD11c                                   | MJ4-27G12      | CD56                                    | AF12-7H3       | CD120b                                  | REA520         | CD328                                   | REA214         |
| CD16                                    | VEP13          | CD59a                                   | REA496         | CD122                                   | REA167         | CD354                                   | REA213         |
| CD18                                    | TS1/18         | CD61                                    | Y2/51          | CD123                                   | AC145          |   |                |
| CD19                                    | LT19           | CD62E                                   | REA280         | CD127                                   | MB15-18C9      |   |                |
| CD20                                    | LT20           | CD62P                                   | REA389         | CD137L                                  | REA254         |   |                |
| CD21                                    | HB5            | CD63                                    | H5C6           | CD138                                   | REA104         |   |                |
| CD22                                    | REA340         | CD66abce                                | TET2           | CD140b                                  | REA363         |   |                |
| CD23                                    | M-L23.4        | CD66b                                   | REA306         | CD146                                   | 541-10B2       |   |                |
| CD24                                    | 32D12          | CD69                                    | FN50           | CD151                                   | REA265         |   |                |
| CD25                                    | 4E3            | CD71                                    | AC102          | CD166                                   | REA442         |   |                |

**Legend**  
■ Stable  
■ Moderate sensitivity\*  
■ Strong sensitivity\*

\* Reducing the concentration of one of the kit components (Enzyme R) can aid in preserving sensitive epitopes. For more information please contact us.

## 附表4 多组织解离试剂盒2 (Multi Tissue Dissociation kit 2) 细胞表面抗原保留验证信息

### 验证方法

该试剂盒对小鼠组织细胞的验证方法是基于小鼠肺、脾、外周血或灌注过的肝脏,在 37 °C 条件下使用该试剂盒酶制剂进行 30 分钟的孵育酶解。对人组织的验证方法是基于人 PBMC,单核细胞分化得到的树突细胞、人脐带血管内皮细胞 (HUVEC) 或 SKBR3 细胞系,在 37 °C 条件下使用该试剂盒酶制剂进行 30 分钟的孵育酶解。

反应结束后对需要进行验证的表面抗原使用相应流式抗体标记并进行流式分析,结果与使用缓冲液孵育的对照组进行比对,如出现抗原信号降低,则认为试剂盒对该抗原存在影响。

### Results, mouse

| Antibody detecting cell surface epitope | Antibody clone | Antibody detecting cell surface epitope | Antibody clone | Antibody detecting cell surface epitope | Antibody clone |
|---|----------------|---|----------------|---|----------------|
| Anti-F4/80                              | REA126         | CD16/32                                 | REA377         | CD106                                   | 429 (MCCAM.A)  |
| Anti-Gr-1                               | RB6-8C5        | CD19                                    | 6D5            | CD107a                                  | 1D4B           |
| Anti-LGR5                               | DA04-10E8.9    | CD25                                    | REA568         | CD127                                   | A7R34          |
| Anti-Ly-6C                              | 1G7.G10        | CD31                                    | 390            | CD140a                                  | APA5           |
| Anti-Ly-6G                              | REA526         | CD40                                    | FGK45.5        | CD140b                                  | APB5           |
| Anti-MHC II                             | M5/114.15.2    | CD43                                    | REA364         | CD205                                   | NLDC-145       |
| Anti-NK1.1                              | PK136          | CD45                                    | 30F11.1        | CD309                                   | Avas12         |
| Anti-NKp46                              | 29A1.4.9       | CD45R                                   | RA3-6B2        | CD326 (EpCAM)                           | caa7-9G8       |
| Anti-PDCA-1                             | JF05-1C2.4.1   | CD49b                                   | REA541         |   |                |
| Anti-Siglec-H                           | 551.3D3        | CD51                                    | mEF-SK4        |   |                |
| Anti-Ter119                             | Ter-119        | CD61                                    | 2C9.G2(HMβ3-1) |   |                |
| CD3e                                    | REA606         | CD62L                                   | MEL-14-H2.100  |   |                |
| CD4                                     | REA604         | CD80                                    | 16-10A1        |   |                |
| CD8a                                    | REA601         | CD81                                    | EAT2           |   |                |
| CD11b                                   | REA592         | CD90.2                                  | 30-H12         |   |                |
| CD11c                                   | N418           | CD105                                   | MJ7/18         |   |                |

## Results, human

| Antibody detecting cell surface epitope | Antibody clone | Antibody detecting cell surface epitope | Antibody clone | Antibody detecting cell surface epitope | Antibody clone |
|---|----------------|---|----------------|---|----------------|
| anti-CLA                                | HECA-452       | CD28                                    | 15E8           | CD133                                   | AC133          |
| anti-HLA-DR                             | AC122          | CD31                                    | AC128          | CD138                                   | B-B4           |
| anti-KIR2D                              | NKVFS1         | CD33                                    | AC104.3E3      | CD141 (BDCA-3)                          | AD5-14H12      |
| anti-LGR5                               | DA03-22H2.8    | CD34                                    | AC136          | CD144                                   | REA199         |
| anti-NKp80                              | 4A4.D10        | CD36                                    | AC106          | CD146                                   | ME-9F1         |
| anti-PTK7 (CCK-4)                       | 188B           | CD38                                    | IB6            | CD158a/h (KIR2DL1/DS1)                  | 11PB6          |
| anti-Slan (M-DC8)                       | DD1            | CD39                                    | MZ18-23C8      | CD158b (KIR2DL2/DL3)                    | DX27           |
| anti-TCR α/β                            | BW242/412      | CD40                                    | HB14           | CD158e (KIR3DL1)                        | DX9            |
| anti-TCR γ/δ                            | 11F2           | CD44                                    | DB105          | CD158e/k (KIR3DL1/DL2)                  | 5.331          |
| CD1c (BDCA-1)                           | AD5-8E7        | CD45                                    | 5B1            | CD161 (NKR-P1A)                         | 191B8          |
| CD2                                     | LT2            | CD45RA                                  | T6D11          | CD163                                   | GHI/61.1       |
| CD3                                     | BW264/56       | CD45RO                                  | UCHL1          | CD197 (CCR7)                            | FR11-11E8      |
| CD4                                     | VIT4           | CD49d                                   | MZ18-24A9      | CD203c                                  | FR3-16A11      |
| CD4                                     | M-T466         | CD49e                                   | NKI-SAM1       | CD209                                   | DCN47.5        |
| CD6                                     | M-T411         | CD49f                                   | GoH3           | CD226 (DNAM-1)                          | DX11           |
| CD8                                     | BW135/80       | CD56                                    | AF12-7H3       | CD266                                   | ITEM-4         |
| CD10                                    | 97C5           | CD57                                    | TB03           | CD271                                   | ME20.4 1.H4    |
| CD11b                                   | M1/70.15.11.5  | CD62L                                   | 145/15         | CD294 (CRTH2)                           | BM16           |
| CD11c                                   | MJ4-27G12.4.6  | CD63                                    | H5C6           | CD303 (BDCA-2)                          | AC144          |
| CD14                                    | TÚK4           | CD66abce                                | TET2           | CD314 (NKG2D)                           | BAT221         |
| CD15                                    | VIMC6          | CD73                                    | AD2            | CD324                                   | 67A4           |
| CD16                                    | VEP13          | CD84                                    | MZ18-21F6      | CD326 (EpCAM)                           | HEA-125        |
| CD19                                    | LT19           | CD90                                    | DG3            | CD335 (NKp46)                           | 9E2            |
| CD20                                    | LT20           | CD95                                    | DX2            | CD337 (NKp30)                           | AF29-4D12      |
| CD24                                    | 32D12          | CD101                                   | BB27           |   |                |
| CD25                                    | 4E3            | CD105                                   | 43A4E1         |   |                |
| CD26                                    | FR10-11G9      | CD123                                   | AC145          |   |                |
| CD27                                    | M-T271         | CD127                                   | MB15-18C9      |   |                |

### Legend

- Stable
- Moderate sensitivity\*
- Strong sensitivity\*

\* Reducing the concentration of one of the kit components (Enzyme P) can aid in preserving sensitive epitopes. For more information please contact us.



## gentleMACS™ 在病毒学研究中的应用

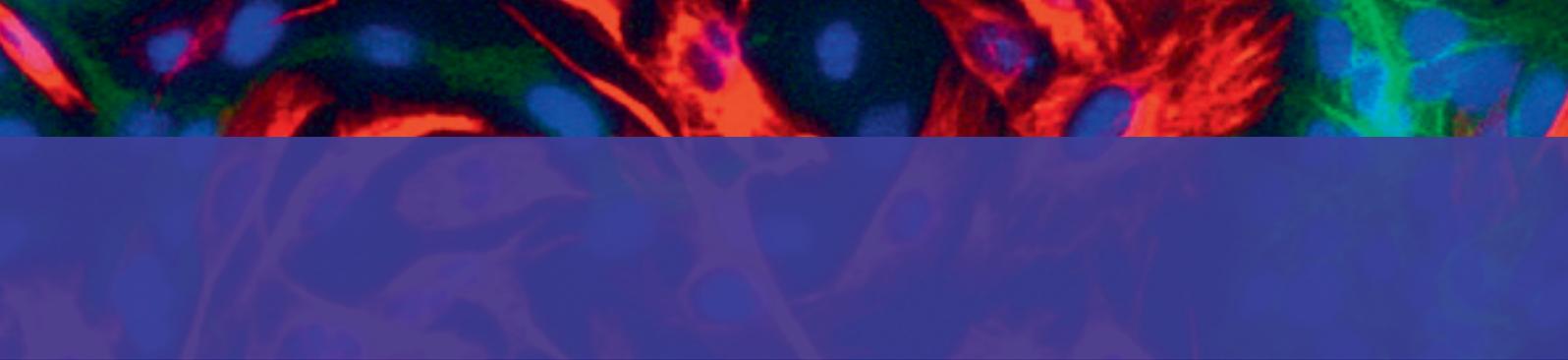
gentleMACS 组织处理器搭配 M 样品管,可用于核酸提取,一次性无菌全封闭运行系统避免气溶胶产生,在含病原体的临床样本处理时提供操作人员的安全保障,超过 500 篇从事病毒研究的引用文献,证明 gentleMACS 的安全性和性能可靠性。

### 冠状病毒 (Coronaviridae)

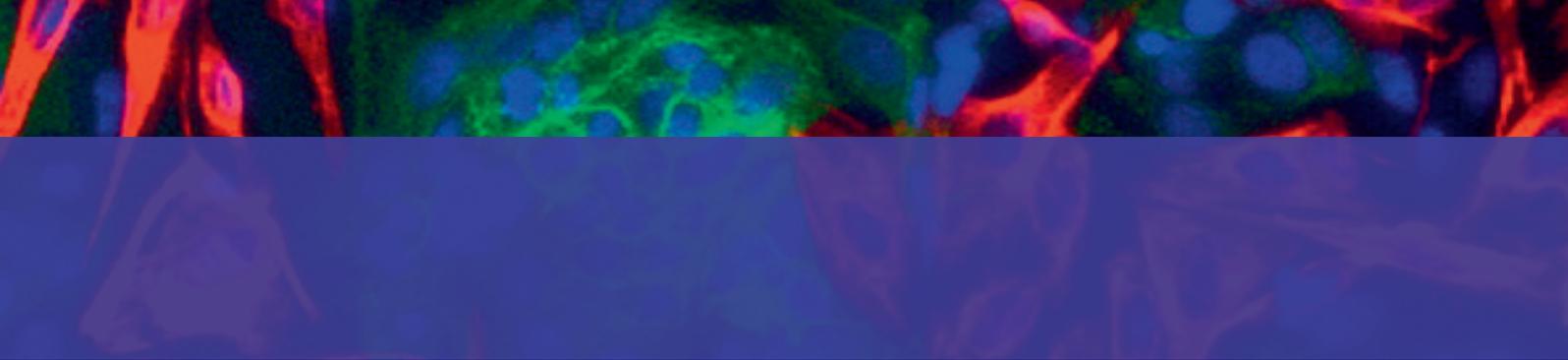
|                          |                     |   |
|--------------------------|---------------------|---|
| 中东呼吸综合征冠状病毒 (MERS-CoV)   | 分离并分析感染小鼠肺部病毒滴度     | Knaap, R. C. M. et al. (2019) The deubiquitinating activity of middle east respiratory syndrome coronavirus papain-like protease delays the innate immune response and enhances virulence in a mouse model. <i>Microbiology</i> . |
| 重症急性呼吸综合征冠状病毒 (SARS-CoV) | 分离并分析感染小鼠肺部病毒滴度     | Castaño-Rodríguez, C. et al. (2018) Role of severe acute respiratory syndrome coronavirus viroporins E, 3a, and 8a in replication and pathogenesis. <i>mBio</i> 9(3): e02325-17.  |
|                          | 分析感染小鼠肺部病毒滴度并提取总RNA | Jimenez-Guardeño, J. M. et al. (2015) Identification of the mechanisms causing reversion to virulence in an attenuated SARS-CoV for the design of a genetically stable vaccine. <i>PLOS Pathogens</i> 11(10): e1005215.           |

### 逆转录病毒 (Retroviridae)

|               |                     |  |
|---------------|---------------------|--|
| 人免疫缺陷病毒 (HIV) | HIV感染病人生殖道组织的免疫细胞分析 | Trifonova, R. T. et al. (2018) Myeloid cells in intact human cervical explants capture HIV and can transmit it to CD4 T cells. <i>Frontiers in Immunology</i> 9, 2719. |
| 猴免疫缺陷病毒 (SIV) | 病毒感染恒河猴的内脏活组织检验样本分析 | Ortiz, A. M. et al. (2018) Experimental microbial dysbiosis does not promote disease progression in SIV-infected macaques. <i>Nature Medicine</i> 24(9), 1313–1316.    |



| 丝状病毒 (Filoviridae)       |                           |   |
|--------------------------|---------------------------|---|
| 埃博拉病毒 (Ebola virus)      | 分析感染小鼠肺和脾内病毒滴度            | Herbert, A. S. et al. (2015) Niemann-Pick C1 is essential forebolavirus replication and pathogenesis in vivo. mBio 6,e00565-15.   |
|                          | 分析感染小鼠心脏、肝脏、肾脏、肺、脑和脾内病毒滴度 | Zumbrun, E. et al. (2012) Development of a murine model for aerosolized ebolavirus infection using a panel of recombinant inbred mice. Viruses 4(12), 3468–3493.  |
| 丙肝病毒 (Hepatitis C virus) | 感染患者肝部相关蛋白提取              | Rowe, I. A. et al. (2014) Paracrine signals from liver sinusoidal endothelium regulate hepatitis C virus replication: Hepatology. Hepatology 59(2), 375–384.  |
| 寨卡病毒 (Zika virus)        | 分离感染小鼠淋巴结和脾脏中免疫细胞         | Khan, S. et al. (2019) Low expression of RNA sensors impacts Zika virus infection in the lower female reproductive tract. Nature Communications 10(1), 4344.  |
|                          | 感染小鼠体内病毒滴度的分析             | DPA-714 PET imaging reveals global neuroinflammation in Zika Virus-infected mice. Molecular Imaging and Biology 20(2), 275–283.   |
| 西尼罗河病毒 (West Nile virus) | 感染的恒河猴冰冻组织样本中病毒滴度测定       | Verstrepen, B. E. et al. (2014) Vaccine-induced protection of rhesus macaques against plasma viremia after intradermal infection with a European lineage 1 strain of West Nile virus. PLoS ONE 9(1), e112568. <a href="https://www.ncbi.nlm.nih">https://www.ncbi.nlm.nih</a> . |



| 疱疹病毒 (Herpesviridae)           |                            |  |
|--------------------------------|----------------------------|--|
| 巨细胞病毒 (Cytomegalovirus)        | 感染小鼠肝脏、唾液腺内免疫细胞分离及测定动物病毒滴度 | Anderson, C. K. et al. (2019) CD8+ T cells can compensate for the absence of conventional T cells during viral infection. Cell Reports 27(2), 537–548.e5.  |
| 单纯疱疹性病毒 (herpes simplex virus) | 高效液相色谱分析(HPLC)感染小鼠肺组织成分    | Quenelle, D. C. et al. (2018) Efficacy of pritelivir and acyclovir in the treatment of herpes simplex virus infections in a mouse model of herpes simplex encephalitis. Antiviral Research 149,1–6.  |
| 黏病毒 (Orthomyxoviridae)         |                            |  |
| 甲型流感病毒                         | 基于流式分析感染小鼠淋巴结及肺脏细胞群        | Hemann, E. A. et al. (2019) Interferon- $\lambda$ modulates dendritic cells to facilitate T cell immunity during infection with influenza A virus. Nature Immunology 20(8), 1035–1045. <a href="https://www.ncbi.nlm.nih.gov/pubmed/31235953">https://www.ncbi.nlm.nih.gov/pubmed/31235953</a> |
| 乙型流感病毒                         | 检测病毒感染小鼠肺部的病毒滴度            | Chai, N. et al. (2017) A broadly protective therapeutic antibody against influenza B virus with two mechanisms of action. Nature Communications 8(1), 14234.   |
| 小RNA病毒 (Picornaviridae)        |                            |  |
| 鼻病毒 (Rhinovirus)               | 基于流式分析感染小鼠肺脏细胞群            | Toussaint, M. et al. (2017) Host DNA released by NETosis promotes rhinovirus-induced type-2 allergic asthma exacerbation. Nature Medicine 23(6), 681–691.  |

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