

## pLenti-PSME1-sgRNA

| 产品编号   | 产品名称               | 包装  |
|--------|--------------------|-----|
| L30215 | pLenti-PSME1-sgRNA | 5μg |

### 产品简介:

- pLenti-PSME1-sgRNA (PSME1基因敲除质粒)是一种在动物细胞中可以同时表达Cas9、目的基因的sgRNA和puromycin抗性基因的质粒。用于在动物细胞中直接基于CRISPR/Cas9技术敲除目的基因，或者通过包装慢病毒后基于CRISPR/Cas9技术敲除目的基因。本质粒中sgRNA的有效性已经通过T7E1法的验证。
- 本质粒在细菌中为Amp抗性，全长约13,000bp。本质粒的关键图谱信息请参考图1。本质粒可直接转染细胞用于目的基因的CRISPR/Cas9敲除，以及通过puromycin筛选稳定细胞株；也可以与pMDLg、Rev及VSV-g共转HEK293T细胞进行重组慢病毒(lentivirus)的包装，然后再用于感染细胞或组织并进行目的基因的CRISPR/Cas9敲除。



图1. 表达sgRNA、Cas9和puromycin抗性的pLenti-sgRNA质粒关键图谱信息。

- 本质粒中的sgRNA基于碧云天研发的CRISPR/Cas9 sgRNA快速筛选和验证体系获得，sgRNA的有效性已经通过T7E1法验证。
- 本质粒用于实验时，建议同时选购无任何靶向的对照质粒pLenti-Control-sgRNA (L00011)或靶向GFP的对照质粒pLenti-GFP-sgRNA (L00013)。
- 碧云天同时提供基于CRISPR/Cas9技术的PSME1基因敲除的质粒(L30215 pLenti-PSME1-sgRNA)、慢病毒(L30216 PSME1 Knockout Lentivirus)、HEK293T细胞(L30217 PSME1 Knockout HEK293T Cells)、HEK293T敲除细胞的RIPA裂解液(L30218 PSME1 Knockout HEK293T RIPA Lysate)、HEK293T敲除细胞的Trizol裂解液(L30219 PSME1 Knockout HEK293T Trizol Lysate)等产品，具体请在碧云天网站查询或在本产品网点击相应产品。
- PSME1基因的基本信息如下：

| Species | Gene Symbol | Gene ID | GenBank Accession | Transcript |
|---------|-------------|---------|-------------------|------------|
| Human   | PSME1       | 5720    | BC000352          | NM_006263  |

| About the gene     |  |
|--------------------|--|
| Official Symbol    | PSME1  |
| Previous Symbol    | -  |
| Official Full Name | proteasome activator subunit 1   |
| Synonyms           | IFI5111; PA28alpha   |
| Location           | 14q12  |
| Gene Type          | protein-coding gene  |
| Uniprot ID         | Q06323   |
| Pathway/Library    | others   |
| Gene Summary       | The 26S proteasome is a multicatalytic proteinase complex with a highly ordered structure composed of 2 complexes, a 20S core and a 19S regulator. The 20S core is composed of 4 rings of 28 non-identical subunits; 2 rings are composed of 7 alpha subunits and 2 rings are composed of 7 beta subunits. The 19S regulator is composed of a base, which contains 6 ATPase subunits and 2 non-ATPase subunits, and a lid, which contains up to 10 non-ATPase subunits. Proteasomes are distributed throughout eukaryotic cells at a high concentration and cleave peptides in an ATP/ubiquitin-dependent process in a non-lysosomal pathway. An essential function of a modified proteasome, the immunoproteasome, is the processing of class I MHC peptides. The immunoproteasome contains an alternate regulator, referred to as the 11S regulator or PA28, that replaces the 19S regulator. Three subunits (alpha, beta and gamma) of the 11S regulator have been identified. This gene encodes the alpha subunit of the 11S regulator, one of the two 11S subunits that is induced by gamma-interferon. Three alpha and three beta subunits combine to form a heterohexameric ring. Two transcripts encoding different isoforms have been identified. |



<https://www.beyotime.com/product/ST551-10mg.htm>。

- c. 转染后约48小时，按照上述检测获得的puromycin筛选浓度加入puromycin，筛选阳性细胞。一般筛选2天后，阴性细胞逐渐死去。培养过程中，可以将细胞转至6孔板或10cm培养皿进行扩大培养。一周之后，puromycin浓度可减半。如果有必要后续可以通过将细胞稀释至2.5个/ml，然后按照每孔200 $\mu$ l接种到96孔板中(每孔平均0.5个细胞)，筛选单克隆细胞株。

#### 5. 基因编辑的鉴定:

- a. 对于多克隆细胞，可以通过T7 Endonuclease I (T7EI)进行鉴定，即提取细胞的基因组DNA，在sgRNA序列两边设计引物进行PCR扩增，然后进行T7EI酶切，具体请参考碧云天的T7 Endonuclease I (CRISPR等基因突变鉴定用) (D7080)或基因组编辑突变检测试剂盒(D0508); 也可以通过相应的抗体进行检测。
- b. 对于单克隆细胞，可通过PCR扩增出sgRNA靶向的基因片段后进行常规测序的方式进行验证，同时也可以使用相应的抗体进行检测。

#### 相关产品:

| 产品编号               | 产品名称   | 包装                   |
|--------------------|--|----------------------|
| L00002-5 $\mu$ g   | CRISPR/Cas9 Packaging Vectors Set A                          | 5 $\mu$ g/each       |
| L00002-100 $\mu$ g | CRISPR/Cas9 Packaging Vectors Set A                          | 100 $\mu$ g/each     |
| L00011-5 $\mu$ g   | pLenti-Control-sgRNA   | 5 $\mu$ g            |
| L00011-100 $\mu$ g | pLenti-Control-sgRNA   | 100 $\mu$ g          |
| L00013-5 $\mu$ g   | pLenti-GFP-sgRNA   | 5 $\mu$ g            |
| L00013-100 $\mu$ g | pLenti-GFP-sgRNA   | 100 $\mu$ g          |
| C0222              | 青霉素-链霉素溶液(100X)  | 100ml                |
| C0351-1ml          | Polybrene (Hexadimethrine Bromide)                           | 1ml                  |
| C0351-50mg         | Polybrene (Hexadimethrine Bromide)                           | 50mg                 |
| C0521              | Lipo293 <sup>TM</sup> 转染试剂                                   | 0.5/1.5/7.5ml        |
| C0526              | Lipo6000 <sup>TM</sup> 转染试剂                                  | 0.5/1.5/7.5ml        |
| C0533              | Lipo8000 <sup>TM</sup> 转染试剂                                  | 0.5/1.5/7.5ml        |
| D0378              | Stbl3甘油菌   | 200 $\mu$ l          |
| ST551-10mg         | Puromycin Dihydrochloride (嘌呤霉素)                             | 10mg/ml $\times$ 1ml |
| ST551-50mg         | Puromycin Dihydrochloride (嘌呤霉素)                             | 10mg/ml $\times$ 5ml |
| ST551-250mg        | Puromycin Dihydrochloride (嘌呤霉素)                             | 250mg                |
| ST1380-500mg       | Polybrene ( $\geq$ 94%, Reagent grade)                       | 500mg                |
| ST1380-2g          | Polybrene ( $\geq$ 94%, Reagent grade)                       | 2g                   |
| ST1380-10g         | Polybrene ( $\geq$ 94%, Reagent grade)                       | 10g                  |
| FF345-10pcs        | 针头滤器(0.45 $\mu$ m/28mm, PES, Sterile, Sartorius分装)           | 10个/袋                |
| FF345T-10pcs       | 针头滤器(0.45 $\mu$ m/28mm, PES, Sterile, 进口分装)                  | 10个/袋                |
| FF345-50pcs        | 针头滤器(0.45 $\mu$ m/28mm, PES, Sterile, Sartorius原装)           | 50个/盒                |
| FF365-10pcs        | BeyoGold <sup>TM</sup> 针头滤器(0.45 $\mu$ m/33mm, PES, Sterile) | 10个/袋                |
| FF365-100pcs       | BeyoGold <sup>TM</sup> 针头滤器(0.45 $\mu$ m/33mm, PES, Sterile) | 100个/盒               |
| FF375-10pcs        | BeyoGold <sup>TM</sup> 针头滤器(0.45 $\mu$ m/13mm, PES, Sterile) | 10个/袋                |
| FF375-100pcs       | BeyoGold <sup>TM</sup> 针头滤器(0.45 $\mu$ m/13mm, PES, Sterile) | 100个/盒               |
| FUF158-2pcs        | 超滤管(15ml, 100kDa MWCO, PES, Sartorius分装)                     | 2个/袋                 |
| FUF158-12pcs       | 超滤管(15ml, 100kDa MWCO, PES, Sartorius分装)                     | 12个/袋                |

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