

## pLenti-IL12B-sgRNA

产品编号	产品名称	包装
L19825	pLenti-IL12B-sgRNA	5μg

### 产品简介:

- pLenti-IL12B-sgRNA (IL12B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IL12B基因敲除的质粒(L19825 pLenti-IL12B-sgRNA)、慢病毒(L19826 IL12B Knockout Lentivirus)、HEK293T细胞(L19827 IL12B Knockout HEK293T Cells)、HEK293T敲除细胞的RIPA裂解液(L19828 IL12B Knockout HEK293T RIPA Lysate)、HEK293T敲除细胞的Trizol裂解液(L19829 IL12B 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。
- IL12B基因的基本信息如下：

Species	Gene Symbol	Gene ID	GenBank Accession	Transcript
Human	IL12B	3593	BC067499	NM_002187

About the gene	
Official Symbol	IL12B
Previous Symbol	NKSF2
Official Full Name	interleukin 12B
Synonyms	CLMF; IL-12B; NKSF; CLMF2
Location	5q33.3
Gene Type	protein-coding gene
Uniprot ID	P29460
Pathway/Library	Diabetes Related Genes Library
Gene Summary	This gene encodes a subunit of interleukin 12, a cytokine that acts on T and natural killer cells, and has a broad array of biological activities. Interleukin 12 is a disulfide-linked heterodimer composed of the 40 kD cytokine receptor like subunit encoded by this gene, and a 35 kD subunit encoded by IL12A. This cytokine is expressed by activated macrophages that serve as an essential inducer of Th1 cells development. This cytokine has been found to be important for sustaining a sufficient number of memory/effector Th1 cells to mediate long-term protection to an intracellular pathogen. Overexpression of this gene was observed in the central nervous system of patients with multiple sclerosis (MS), suggesting a role of this cytokine in the pathogenesis of the disease. The promoter polymorphism of this gene has been reported to be associated with the severity of atopic and non-atopic asthma in children.

### 包装清单:

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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:

- 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。
- 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

Version 2020.12.09