

## FFAR3 Knockout HEK293T RIPA Lysate

| 产品编号   | 产品名称                               | 包装    |
|--------|------------------------------------|-------|
| L26658 | FFAR3 Knockout HEK293T RIPA Lysate | 100µg |

### 产品简介:

- FFAR3 Knockout HEK293T RIPA Lysate (FFAR3基因敲除HEK293T细胞RIPA裂解液)是通过同时表达Cas9、目的基因sgRNA和puromycin抗性基因并实现了目的基因CRISPR敲除的多克隆HEK293T细胞的RIPA裂解液。该细胞中目的基因的敲除已经通过T7EI法的验证。本产品可用于该目的基因敲除后其信号通路相关蛋白的研究,也可以用于该基因相应抗体的验证。
- 本RIPA裂解液源于可同时表达Cas9、目的基因sgRNA和puromycin抗性基因的慢病毒感染HEK293T细胞并经过puromycin筛选后获得的多克隆细胞。制备该细胞的相应慢病毒的基因序列的关键图谱信息请参考图1。



图1. 可同时表达sgRNA、Cas9和puromycin抗性的慢病毒其基因序列的关键图谱信息。

- 该细胞中目的基因的敲除已经通过T7EI法的验证。
- 由于本细胞是通过CRISPR/Cas9技术获得的多克隆细胞,基于CRISPR/Cas9技术的特点,理论上平均有2/3的细胞发生移码突变而导致了目的基因的敲除,平均有1/3的细胞并未发生移码突变。很多情况下有约2/3的细胞发生目的基因的敲除,已经足以进行很多的目的基因的生物学的功能的研究了。如果希望获得100%基因敲除的细胞,可以自行使用本产品筛选单克隆细胞,或者委托碧云天进行单克隆细胞株的筛选服务。
- 本RIPA裂解液用于实验时,建议同时选购无任何靶向的对照细胞RIPA裂解液Control Knockout HEK293T RIPA Lysate (L00025)或靶向GFP的对照RIPA裂解液GFP Knockout HEK293T RIPA Lysate (L00027)。
- 碧云天同时提供基于CRISPR/Cas9技术的FFAR3基因敲除的质粒(L26655 pLenti-FFAR3-sgRNA)、慢病毒(L26656 FFAR3 Knockout Lentivirus)、HEK293T细胞(L26657 FFAR3 Knockout HEK293T Cells)、HEK293T敲除细胞的RIPA裂解液(L26658 FFAR3 Knockout HEK293T RIPA Lysate)、HEK293T敲除细胞的Trizol裂解液(L26659 FFAR3 Knockout HEK293T Trizol Lysate)等产品,具体请在碧云天网站查询或在本产品网页点击相应产品。
- 用于制备本产品的RIPA裂解液为碧云天生产的P0013B RIPA裂解液(强),其具体组分请查阅产品网页或说明书。
- FFAR3基因的基本信息如下:

| Species | Gene Symbol | Gene ID | GenBank Accession | Transcript |
|---------|-------------|---------|-------------------|------------|
| Human   | FFAR3       | 2865    | BC035657          | NM_005304  |

| About the gene     |  |
|--------------------|--|
| Official Symbol    | FFAR3  |
| Previous Symbol    | GPR41  |
| Official Full Name | free fatty acid receptor 3   |
| Synonyms           | FFA3R  |
| Location           | 19q13.12   |
| Gene Type          | protein-coding gene  |
| Uniprot ID         | O14843   |
| Pathway/Library    | others   |
| Gene Summary       | G protein-coupled receptor that is activated by a major product of dietary fiber digestion, the short chain fatty acids (SCFAs), and that plays a role in the regulation of whole-body energy homeostasis and in intestinal immunity. In omnivorous mammals, the short chain fatty acids acetate, propionate and butyrate are produced primarily by the gut microbiome that metabolizes dietary fibers. SCFAs serve as a source of energy but also act as signaling molecules. That G protein-coupled receptor is probably coupled to the pertussis toxin-sensitive, G(i/o)-alpha family of G proteins. Its activation results in the formation of inositol 1,4,5-trisphosphate, the mobilization of intracellular calcium, the phosphorylation of the MAPK3/ERK1 and MAPK1/ERK2 kinases and the inhibition of intracellular cAMP accumulation |

(PubMed:12711604). Activated by SCFAs and by beta-hydroxybutyrate, a ketone body produced by the liver upon starvation, it inhibits N-type calcium channels and modulates the activity of sympathetic neurons through a signaling cascade involving the beta and gamma subunits of its coupled G protein, phospholipase C and MAP kinases. Thereby, it may regulate energy expenditure through the control of the sympathetic nervous system that controls for instance heart rate. Upon activation by SCFAs accumulating in the intestine, it may also signal to the brain via neural circuits which in turn would regulate intestinal gluconeogenesis. May also control the production of hormones involved in whole-body energy homeostasis. May for instance, regulate blood pressure through renin secretion. May also regulate secretion of the PYY peptide by enteroendocrine cells and control gut motility, intestinal transit rate, and the harvesting of energy from SCFAs produced by gut microbiota. May also indirectly regulate the production of LEP/Leptin, a hormone acting on the CNS to inhibit food intake, in response to the presence of short-chain fatty acids in the intestine. Finally, may also play a role in glucose homeostasis. Besides its role in energy homeostasis, may play a role in intestinal immunity. May mediate the activation of the inflammatory and immune response by SCFAs in the gut, regulating the rapid production of chemokines and cytokines by intestinal epithelial cells. Among SCFAs, the fatty acids containing less than 6 carbons, the most potent activators are probably propionate, butyrate and pentanoate while acetate is a poor activator (PubMed:12496283, PubMed:12711604). FFAR3 HUMAN,O14843

### 包装清单:

| 产品编号   | 产品名称                               | 包装    |
|--------|------------------------------------|-------|
| L26658 | FFAR3 Knockout HEK293T RIPA Lysate | 100µg |
| —      | 说明书                                | 1份    |

### 保存条件:

-20°C保存, 3个月有效; -80°C保存, 至少一年有效。

### 注意事项:

- 碧云天拥有sgRNA序列的知识产权, 如果需要sgRNA序列, 请在订购后发送邮件向info@beyotime.com索取。sgRNA序列信息与本产品, 未经碧云天书面许可不得用于任何商业用途, 也不得移交给订货人所在实验室外的任何个人或单位。使用者在发表研究论文或结果时, 应注明来源。
- 对于非目录产品的CRISPR基因敲除细胞RIPA裂解液的定制, 可联系碧云天技术服务service@beyotime.com。
- 本产品仅限于专业人员的科学研究用, 不得用于临床诊断或治疗, 不得用于食品或药品, 不得存放于普通住宅内。
- 为了您的安全和健康, 请穿实验服并戴一次性手套操作。

### 使用说明:

#### 1. 细胞RIPA裂解液样品的蛋白浓度测定:

推荐使用碧云天生产的BCA蛋白浓度测定试剂盒(P0009/P0010/P0010S/P0011/P0012/P0012S)测定蛋白浓度。由于本产品含有较高浓度的去垢剂, 不建议使用Bradford法测定本产品的蛋白浓度。RIPA裂解液的使用说明请参考:  
<https://www.beyotime.com/product/P0013B.htm>。

#### 2. 细胞RIPA裂解液的使用:

本RIPA裂解液测定浓度后加入SDS-PAGE蛋白上样缓冲液即可用于SDS-PAGE、Western检测、以及目的基因抗体的验证等。

### 相关产品:

| 产品编号     | 产品名称                                 | 包装        |
|----------|--------------------------------------|-----------|
| L00025   | Control Knockout HEK293T RIPA Lysate | 100µg     |
| L00027   | GFP Knockout HEK293T RIPA Lysate     | 100µg     |
| P0009    | BCA蛋白浓度测定试剂盒(增强型)                    | 5000次     |
| P0010    | BCA蛋白浓度测定试剂盒(增强型)                    | 500次      |
| P0010S   | BCA蛋白浓度测定试剂盒(增强型)                    | 200次      |
| P0011    | BCA蛋白浓度测定试剂盒                         | 5000次     |
| P0012    | BCA蛋白浓度测定试剂盒                         | 500次      |
| P0012S   | BCA蛋白浓度测定试剂盒                         | 200次      |
| P0012A   | SDS-PAGE凝胶配制试剂盒                      | 可制30-50块胶 |
| P0012AC  | SDS-PAGE凝胶快速配制试剂盒                    | 可制30-50块胶 |
| P0013B   | RIPA裂解液(强)                           | 100ml     |
| P0014A/B | SDS-PAGE电泳液(Tris-Gly, Powder)        | 1/10L     |
| P0014C/D | SDS-PAGE电泳液(Tris-Gly, 10X)           | 100/500ml |
| P0015    | SDS-PAGE蛋白上样缓冲液(5X)                  | 2ml       |

|        |                     |      |
|--------|---------------------|------|
| P0015L | SDS-PAGE蛋白上样缓冲液(5X) | 15ml |
| P0015B | SDS-PAGE蛋白上样缓冲液(2X) | 5ml  |
| P0015F | SDS-PAGE蛋白上样缓冲液(6X) | 2ml  |

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