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# Bifunctional Chimeras of Glutamylcysteine Synthetase and Glutathione Synthetase (Crude Enzyme)

| 产品编号 | 产品名称 | 包装 |
|---|---|---|
| P3829-100ml | Bifunctional Chimeras of Glutamylcysteine Synthetase and Glutathione Synthetase (Crude Enzyme) | 100ml |
| P3829-1L | Bifunctional Chimeras of Glutamylcysteine Synthetase and Glutathione Synthetase (Crude Enzyme) | 1L |

## 产品简介：

- Bifunctional Chimeras of Glutamylcysteine Synthetase and Glutathione Synthetase，中文名为谷氨酰半胱氨酸合成/谷胱甘肽合成双功能酶。本产品为大肠杆菌表达的谷氨酰半胱氨酸合成/谷胱甘肽合成双功能酶，并经简单纯化获得的可以确保达到一定酶活力的粗酶液。
- 由于本产品需新鲜制备，确认订购后约6个工作日才可以发货。个别情况首次制备出现问题，发货时间会顺延。
- 本产品可以提供十公斤、百公斤乃至吨级的粗酶液，如有需求请联系碧云天。
- GSH, and by extension GCL, is critical to cell survival. Nearly every eukaryotic cell, from plants to yeast to humans, expresses a form of the GCL protein for the purpose of synthesizing GSH. To further highlight the critical nature of this enzyme, genetic knockdown of GCL results in embryonic lethality. Furthermore, dysregulation of GCL enzymatic function and activity is known to be involved in the vast majority of human diseases, such as diabetes, Parkinson's disease, Alzheimers disease, COPD, HIV/AIDS, and cancer. This typically involves impaired function leading to decreased GSH biosynthesis, reduced cellular antioxidant capacity, and the induction of oxidative stress. However, in cancer, GCL expression and activity is enhanced, which serves to both support the high level of cell proliferation and confer resistance to many chemotherapeutic agents.Glutathione synthase belongs to the family of ligases, specifically those forming carbon-nitrogen bonds as acid-D-amino-acid ligases (peptide synthases). This product with the indicated enzyme activity was briefly purified from engineered *E.coli*.
- 产品详细信息见下表：

| **About this product** | |
|---|---|
| Name | Bifunctional Chimeras of Glutamylcysteine Synthetase and Glutathione Synthetase (Crude Enzyme)；谷氨酰半胱氨酸合成/谷胱甘肽合成双功能酶(粗酶液) |
| Application | - |
| Appearance | Clear to translucent yellow solution |
| Enzyme activity | Undetermined |
| **About this enzyme** | |
| Name | Bifunctional Chimeras of Glutamylcysteine Synthetase and Glutathione Synthetase；谷氨酰半胱氨酸合成/谷胱甘肽合成双功能酶 |
| CAS Number | 9023-64-7/9023-62-5 |
| EC Number | 6.3.2.2/ 6.3.2.3 |
| Enzymatic Reaction | L-glutamate + L-cysteine + ATP ⇌ γ-L-glutamyl-L-cysteine + ADP + phosphate<br>ATP + γ-L-glutamyl-L-cysteine + glycine = ADP + phosphate + glutathione |
| Synonyms | - |
| Systematic name | L-glutamate:L-cysteine γ-ligase (ADP-forming)<br>γ-L-glutamyl-L-cysteine:glycine ligase (ADP-forming) |
| Cofactor(s) | ATP |
| Application | agriculture; medicine; synthesis; biotechnology; pharmacology |

## 包装清单：

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| P3829-1L | Bifunctional Chimeras of Glutamylcysteine Synthetase and Glutathione Synthetase (Crude Enzyme) | 1L |
| — | 说明书 | 1份 |

## 保存条件：

-20ºC或更低温度保存，至少1个月有效。

## 注意事项：

- 由于本产品需新鲜制备，在您确认订购后约6个工作日才能发货。个别情况首次制备出现问题，发货时间会顺延。
- 粗酶液的每次冻融均可能会引起部分失活，所以收到酶液后请根据需要进行分装，并置于-20ºC或更低温度保存。
- 随着保存时间的延长，酶活力会有一定程度的下降，收到产品后应尽快使用。
- 本产品在生产和保存的过程中可能会有混浊或沉淀产生，融化后混匀即可，不影响正常使用。
- 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. 收到产品后请立即使用或按照说明书推荐的条件保存。随着保存时间的延长，酶活力会有一定程度的下降。
2. 具体的最佳工作条件请自行参考相关文献，或者通过实验进行摸索和优化。

## 相关产品：

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