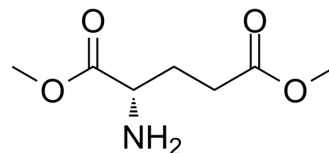


## Dimethyl L-glutamate

|                    |   |
|--------------------|---|
| Cat. No.:          | HY-W037817  |
| CAS No.:           | 6525-53-7   |
| Molecular Formula: | C <sub>7</sub> H <sub>13</sub> NO <sub>4</sub>  |
| Molecular Weight:  | 175.18  |
| Target:            | Potassium Channel; Bacterial  |
| Pathway:           | Membrane Transporter/Ion Channel; Anti-infection  |
| Storage:           | Please store the product under the recommended conditions in the Certificate of Analysis. |



### BIOLOGICAL ACTIVITY

|                           |   |
|---------------------------|---|
| Description               | Dimethyl L-glutamate (Dimethyl glutamate), a membrane-permeable analog of Glutamate, can stimulate insulin release induced by Glucose. Dimethyl L-glutamate suppresses the K <sub>ATP</sub> channel activities. Dimethyl L-glutamate inhibits <i>E. gracilis</i> growth and causes abnormal cell division. Dimethyl L-glutamate can be used in the research of diabetes, glucose transport, phosphorylation, and further metabolism <sup>[1][2][3][4]</sup> . |
| IC <sub>50</sub> & Target | K <sub>ATP</sub> channel <sup>[4]</sup>   |

### REFERENCES

- [1]. J Cancelas, et al. Potentiation by glutamic acid dimethyl ester of GLP-1 insulinotropic action in fed anaesthetized rats. *Int J Mol Med*. 2001 Nov;8(5):531-2.
- [2]. Sener A, et al. Insulinotropic action of glutamic acid dimethyl ester. *American Journal of Physiology-Endocrinology and Metabolism*, 1994, 267(4): E573-E584.
- [3]. I S Owens, et al. Induction of abnormal cell division in *Euglena gracilis* by glutamic diethyl ester. *J Protozool*. 1969 May;16(2):211-5.
- [4]. Hidenori Katsuta, et al. Insulinotropic action of glutamate is dependent on the inhibition of ATP-sensitive potassium channel activities in MIN 6 beta cells. *Biochem Biophys Res Commun*. 2003 Nov 21;311(3):660-4.

**Caution: Product has not been fully validated for medical applications. For research use only.**

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