
Product Data Sheet

Product Name: Dimethyl L-glutamate

Cat. No.: GC66836

Chemical Properties

Cas. No. 6525-53-7

Formula $C_7H_{13}NO_4$ M.Wt 175.18

Solubility Storage Store at $-20^{\circ}C$

General tips For obtaining a higher solubility, please warm the tube at $37^{\circ}C$ and shake it in the ultrasonic bath for a while. Stock solution can be stored below $-20^{\circ}C$ for several months.

Shipping Condition Evaluation sample solution: ship with blue ice. All other available size: ship with RT, or blue ice upon request.

Structure

Background

Dimethyl L-glutamate (Dimethyl glutamate), a membrane-permeable analog of Glutamate, can stimulate **insulin** release induced by Glucose. Dimethyl L-glutamate suppresses the **K_{ATP}** channel activities. Dimethyl L-glutamate inhibits *E. gracilis* growth and causes abnormal cell division. Dimethyl L-glutamate can be used in the research of diabetes, glucose transport, phosphorylation, and further metabolism^{[1][2][3][4]}.

[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.

Tel: (909) 407-4943 Fax: (626) 353-8530 E-mail: tech@glpbio.com

Address: 10292 Central Ave. #205, Montclair, CA, USA