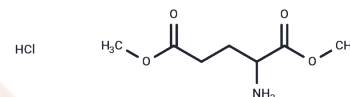


## Dimethyl DL-Glutamate (hydrochloride)

## Chemical Properties

CAS No. :	13515-99-6
Formula:	C <sub>7</sub> H <sub>14</sub> ClNO <sub>4</sub>
Molecular Weight:	211.64
Storage:	Keep away from moisture Powder: -20°C for 3 years   In solvent: -80°C for 1 year <small>Actual storage temperature shall be subject to the COA.</small>



## Biological Description

Description	Dimethyl DL-glutamate is a cell-permeant glutamic acid derivative that enhances insulin release in response to glucose in isolated islets and in animal models of diabetes.
Targets(IC50)	Others,Amino Acids and Derivatives
In vitro	Dimethyl DL-Glutamate (hydrochloride) potentiates the insulinotropic potential of glyburide and glucagon-like peptide 1[1]. Dimethyl DL-glutamate is used as a cell-permeable form of glutamate in studies of glutamate action in $\beta$ -cells[2].

## Solubility Information

Solubility	DMSO: 27.5 mg/mL (129.94 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
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## Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	4.725 mL	23.625 mL	47.250 mL
5 mM	0.945 mL	4.725 mL	9.450 mL
10 mM	0.4725 mL	2.3625 mL	4.725 mL
50 mM	0.0945 mL	0.4725 mL	0.945 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

### Reference

Jesús Cancelas, María L. Villanueva-Peñacrrillo, Valverde I, et al. Potentiation and prolongation of the insulinotropic action of glucagon-like peptide 1 by methyl pyruvate or dimethyl ester of l-glutamic acid in a type 2 diabetes animal model[J]. Endocrine, 2001, 16(2):113-116.

Casimir M, Lasorsa F M, Rubi B, et al. Mitochondrial Glutamate Carrier GC1 as a Newly Identified Player in the Control of Glucose-stimulated Insulin Secretion[J]. Journal of Biological Chemistry, 2009, 284(37):25004-25014.

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