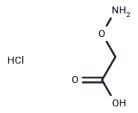
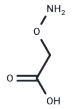
Data Sheet (Cat.No.T5880)

TargetMol

Aminooxyacetic acid hemihydrochloride

Chemical Properties





CAS No. : 2921-14-4

Formula: C2H5NO3·0.5HCl

Molecular Weight: 109.3

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year
Actual storage temperature shall be subject to the COA.

Biological Description

Description	Aminooxyacetic acid hemihydrochloride (Carboxymethoxylamine Hemihydrochloride) is a malate-aspartate shuttle (MAS) inhibitor which also inhibits the GABA degradating enzyme GABA-T.
Targets(IC50)	GABA Receptor
In vivo	At various intervals after aminooxyacetic acid(AOAA) the rats were either injected with one of the convulsive drugs or sacrificed for analysis of the GABA concentration.?AOAA caused a rapid initial (0-30 min) and a later slower increase of GABA in cerebellum and whole brain.?In the synaptosomal fraction the GABA accumulation was delayed and less pronounced when compared to the whole brain.?The bicuculline induced convulsions were markedly potentiated during the first hour but completely blocked from 2-6 h after AOAA.?Picrotoxin showed a somewhat different pattern to bicuculline in the interactions with AOAA.?The initial strong potentiation was not observed but the later phase of protection was present.?In the interactions with 3-MPA, the effect of AOAA was always protective.?The time to onset of convulsions was gradually increased during the first 30 min after AOAA.?This protective effect remained practically unchanged up to 6 h after AOAA.?However, once started, the convulsions were generally of the same duration and intensity.?The results can be interpreted as GABA accumulating after AOAA stimulates GABA receptors to a degree more or less proportional to the whole brain GABA concentration and further that GABA synthetized in neurons is liberated, stimulates inhibitory bicuculline sensitive (predominant) and excitatory bicuculline insensitive receptors and is captured to a large extent by non-neuronal cells[1].

Solubility Information

Solubility	DMSO: 250 mg/mL (2287.28 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+90% Saline: 10 mg/mL (91.49 mM),Solution. 10% DMSO+40% PEG300+5% Tween 80+45% Saline: 2 mg/mL (18.3 mM),Sonication is recommended. *Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.*

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	9.1491 mL	45.7457 mL	91.4913 mL
5 mM	1.8298 mL	9.1491 mL	18.2983 mL
10 mM	0.9149 mL	4.5746 mL	9.1491 mL
50 mM	0.183 mL	0.9149 mL	1.8298 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

Pagliusi S R , Gomes C , José R. Leite, et al. Aminooxyacetic acid induced accumulation of GABA in the rat brain[J]. Archiv für Experimentelle Pathologie und Pharmakologie, 1983, 322(3):210-215.
Korangath P , Teo W W , Sadik H , et al. Targeting Glutamine Metabolism in Breast Cancer with Aminooxyacetate[J]. Clinical Cancer Research, 2015, 21(14):3263-3273.