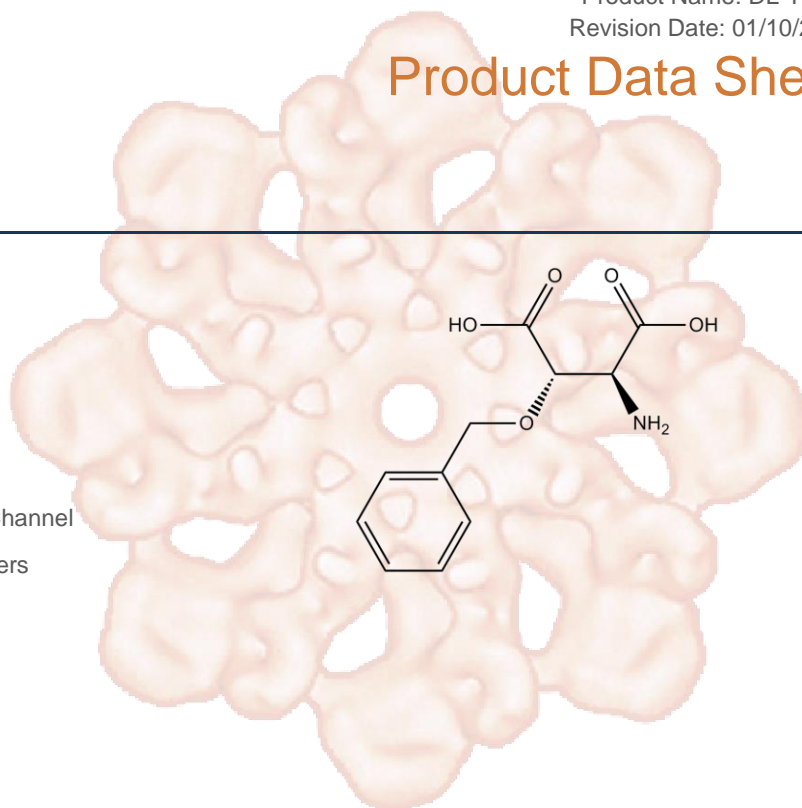


Product Data Sheet

DL-TBOA

Cat. No.:	B5084
CAS No.:	205309-81-5
Formula:	C ₁₁ H ₁₃ NO ₅
M.Wt:	239.23
Synonyms:	
Target:	Membrane Transporter/Ion Channel
Pathway:	Glutamate (EAAT) Transporters
Storage:	Desiccate at -20°C



Solvent & Solubility

<23.92mg/ml in DMSO; insoluble in H₂O

In Vitro

Preparing Stock Solutions	Solvent		Mass		
	Concentration		1mg	5mg	10mg
	1 mM		4.1801 mL	20.9004 mL	41.8008 mL
	5 mM		0.8360 mL	4.1801 mL	8.3602 mL
	10 mM		0.4180 mL	2.0900 mL	4.1801 mL

Please refer to the solubility information to select the appropriate solvent.

Biological Activity

Shortsummary

inhibitor of excitatory amino acid transporters

IC₅₀ & Target

In Vitro

Cell Viability Assay

Cell Line:	COS-1 cells
Preparation method:	The solubility of this compound in DMSO is >10 mM. General tips for obtaining a higher concentration: Please warm the tube at 37°C for 10 minutes and/or shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.
Reacting conditions:	Measurements of glutamate uptake in transfected COS-1 cells assay: 37°C for 12 min.

	Applications:	DL-TBOA markedly inhibited glutamate (1 mM) uptake in transfected cells in a dosedependent manner. The subconfluent cells were washed two times with 300 µl of modified phosphate-buffered saline that contained 137 mM NaCl, 2.7 mM KCl, 8.1 mM Na ₂ HPO ₄ , 1.5 mM KH ₂ PO ₄ , 1mM MgCl ₂ , 1mM CaCl ₂ , and 10 mM D-glucose, pH 7.4, and preincubated in 300 µl of the same buffer at 37°C for 12 min. After aspiration of the buffer, cells were incubated with 1 µM L-glutamate in 100 µl of modified phosphate-buffered saline in the absence or presence of DL-TBOA at various concentrations at 37°C for 12 min.
In Vivo	Animal experiment	
	Animal models:	Males Wistar rats
	Dosage form:	500 µM DL-TBOA
	Applications:	Microdialysis administration of 500µM DL-TBOA into the hippocampus increased 3.4- and nine-fold the extracellular levels of aspartate and glutamate, respectively.
	Preparation method:	Dissolved in Ringer Krebs medium which containing (in mM): NaCl 118, KCl 4.5, MgSO ₄ 1.18, KH ₂ PO ₄ 1.2, CaCl ₂ 2.5, NaHCO ₃ 25.
Other notes:	Please test the solubility of all compounds indoor, and the actual solubility may slightly differ with the theoretical value. This is caused by an experimental system error and it is normal.	

Product Citations

See more customer validations on www.apexbt.com.

References

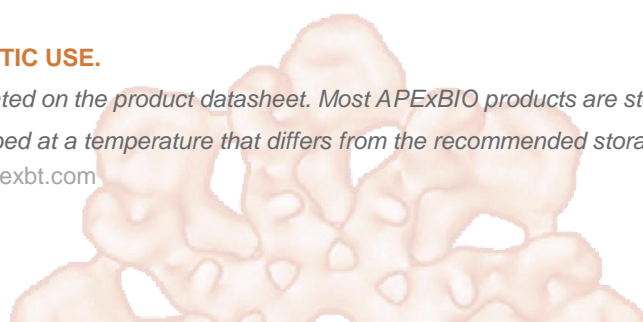
- [1]. KEIKO SHIMAMOTO, BRUNO LEBRUN, YOSHIMI YASUDA-KAMATANI, et al. DL-threo-β-Benzyloxyaspartate, A Potent Blocker of Excitatory Amino Acid Transporters. MOLECULAR PHARMACOLOGY, 53:195–201 (1998).
- [2]. T. MONTIEL, A. CAMACHO, A. M. ESTRADA-SANCHEZ AND L. MASSIEU. DIFFERENTIAL EFFECTS OF THE SUBSTRATE INHIBITOR L-TRANSPYRROLIDINE-2,4-DICARBOXYLATE (PDC) AND THE NON-SUBSTRATE INHIBITOR DL-THREO-β-BENZYLOXYASPARTATE (DL-TBOA) OF GLUTAMATE TRANSPORTERS ON NEURONAL DAMAGE AND EXTRACELLULAR AMINO ACID LEVELS IN RAT BRAIN IN VIVO. Neuroscience 133 (2005) 667–678.

Caution

FOR RESEARCH PURPOSES ONLY.

NOT FOR HUMAN, VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

Specific storage and handling information for each product is indicated on the product datasheet. Most APEX^{BIO} products are stable under the recommended conditions. Products are sometimes shipped at a temperature that differs from the recommended storage



temperature. Shortterm storage of many products are stable in the short-term at temperatures that differ from that required for long-term storage. We ensure that the product is shipped under conditions that will maintain the quality of the reagents. Upon receipt of the product, follow the storage recommendations on the product data sheet.

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