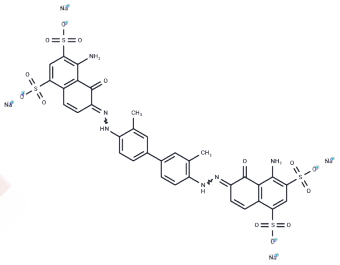
Data Sheet (Cat.No.T0313)

TargetMol

Evans blue

Chemical Properties



CAS No. : 314-13-6

Formula: C34H24N6Na4O14S4

Molecular Weight: 960.78

Storage: Keep away from direct sunlight
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	Evans blue (C.I. 23860) is an effective inhibitor of glutamate uptake by synaptic vesicles and also acts as an antagonist of AMPA/kainate receptors. As an azo dye, Evans blue binds to serum albumin, enabling detection of blood-brain barrier integrity and permeability.
Targets(IC50)	GluR,iGluR,transporter
In vitro	Evans Blue is found to be inhibiting DNA binding of NF-κB at a low concentration of 100 μM[1]. It has proven over the years to be a dependable stain for microscopic determination of cell death[2]. Evans Blue is also a known blocker of a subset of a-amino-3-hydroxy-5-methyl-isoxazole/kainate receptors (IC50=355 nM) for the subunit combination GluR1,2[5]. Evans blue is the first known δ-subunit-specific antagonist of ENaC and activates large-conductance Ca2+-activated K+ channels in sheep bladder myocytes and cultured endothelial cells of human umbilical veins[5].
In vivo	Evans blue pretreatment could inhibit the mast cells degranulation and that may be the main mechanism for prevent animals from C48/80-triggered anaphylaxis and systemic inflammation[4]. Evans blue modulates the non-N-methyl-d-aspartate receptor in rat thalamic neurons, blocks the P2X-purinergic receptor in rat vas deferens, and inhibits the glutamate transporter in rat brain synaptic vesicles[6].

Solubility Information

Solubility	H2O: 104.1 mM,Sonication is recommended. DMSO: 104.1 mM,Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	PBS: 100 mg/mL (104.08 mM),Solution. *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	1.0408 mL	5.2041 mL	10.4082 mL
5 mM	0.2082 mL	1.0408 mL	2.0816 mL
10 mM	0.1041 mL	0.5204 mL	1.0408 mL
50 mM	0.0208 mL	0.1041 mL	0.2082 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

Sharma RK, et al. Bioorg Med Chem Lett. 2004, 14(24):6123-7.
C. Jacyn Baker, et al. Plant Cell, Tissue and Organ Culture. 1994, 39(1):7-12.
Miller DL, et al. Ultrasound Med Biol. 2007, 33(12):1988-96.
Yu-Tong Chen, et al. FASEB Journal. 2016, 30(1): Supplement 723.10.
Roseth S, et al. Biochem Pharmacol. 1998, 56(9):1243-9.