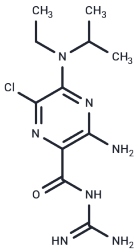
Data Sheet (Cat.No.TQ0157)

TargetMol

EIPA

Chemical Properties



CAS No. : 1154-25-2

Formula: C11H18ClN7O

Molecular Weight: 299.76

Storage: Keep away from moisture,Keep away from direct sunlight,Store at low temperature
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	EIPA (L593754) is a TRPP3 channel inhibitor (IC50=10.5 μM) and an inhibitor of Na+/H+ exchange (NHE). EIPA inhibits megacytosis, promotes autophagy, and can be used in inflammation and tumor studies.
Targets(IC50)	Autophagy,COX,Prostaglandin Receptor,Sodium Channel,TRP/TRPV Channel
In vitro	**METHODS**: Ten cells were pretreated with EIPA (50 μM) for 1.5 h. Dextran index was measured by Dextran uptake assay. **RESULTS**: Immortalized but untransformed hTERT-HME1 mammary epithelial cells and MCF10A cells did not exhibit megacellular drinking in complete medium, but stimulated dextran uptake by nutrient deprivation. Although PIK3CB was found to be required for growth factor-stimulated macrocytosis, oncogenic mutations in PIK3CA were sufficient to induce constitutive macrocytosis in mouse embryonic fibroblast MEFs and untransformed MCF10A cells. [1] **METHODS**: MKN28 cells were treated with EIPA (5-100 μM) for 48 h. Cell proliferation was detected by cell count. **RESULTS**: Cell exposure to EIPA inhibited the proliferation of MKN28 cells in a dose- and time-dependent manner. [2]
In vivo	**METHODS**: To assay in vivo activity, EIPA (10 mg/kg) was injected intraperitoneally into BALB/c mice bearing 4T1 xenografts, and 70 kD FITC-Ficoll was injected into the tumors 1 h later. The mice were necropsied 1 h after Ficoll injection, and the tumors were excised and frozen in OCT. **RESULTS**: EIPA-sensitive 70 kD FITC-Ficoll uptake was observed in in situ homozygous 4T1 tumors of BALB/c mice, suggesting that AMPK activation or other signals are sufficient to trigger the formation of large fusions in vivo. [1]
Cell Research	The effect of EIPA alone (without alanine or proline) is also examined in both control (DMEM cultured cells) and amino acid-starved cells. The cells are incubated for 6 h in DMEM containing 5% FBS and either 0 or 0.3 mM EIPA (labeled QNN and QNE, respectively), HBSS containing either 0 or 0.3 mM EIPA (labeled HNN and HNE, respectively), HBSS with 1.0 mM alanine (labeled HAN) or 0.5 mM proline (labeled HPN), HBSS with 1.0 mM alanine and 0.3 mM EIPA (labeled HAE), and HBSS with 0.5 mM proline and 0.3 mM EIPA (labeled HPE) [2].

Solubility Information

Solubility	DMSO: 135 mg/mL (450.36 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween 80+45% Saline: 4 mg/mL (13.34 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	3.336 mL	16.680 mL	33.360 mL
5 mM	0.6672 mL	3.336 mL	6.672 mL
10 mM	0.3336 mL	1.668 mL	3.336 mL
50 mM	0.0667 mL	0.3336 mL	0.6672 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

Jayashankar V, Edinger AL. Macropinocytosis confers resistance to therapies targeting cancer anabolism. Nat Commun. 2020 Feb 28;11(1):1121.

Wang C, Hu R, Wang T, et al.A bivalent β-carboline derivative inhibits macropinocytosis-dependent entry of pseudorabies virus by targeting the kinase DYRK1A.Journal of Biological Chemistry.2023: 104605.

Hosogi S, et al. An inhibitor of Na(+)/H(+) exchanger (NHE), ethyl-isopropyl amiloride (EIPA), diminishes proliferation of MKN28 human gastric cancer cells by decreasing the cytosolic Cl(-) concentration via DIDS-sensitive pathways. Cell Physiol Biochem. 2012;30(5):1241-53.

Chen L, Xu C, Xu H, et al.RVG29-modified oncolytic herpes simplex virus for intracranial tumor treatment.Nano Today.2025, 61: 102573.

Zhu BY, et al. A new HDAC inhibitor cinnamoylphenazine shows antitumor activity in association with intensive macropinocytosis. Oncotarget. 2017 Feb 28;8(9):14748-14758.

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