PD150606

Cat. No.: HY-100529

CAS No.: 179528-45-1

Molecular Formula: $C_9H_7IO_2S$

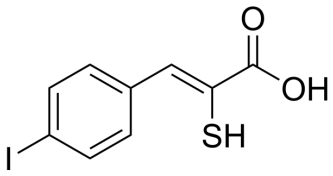
Molecular Weight: 306.12

Target: Proteasome

Pathway: Metabolic Enzyme/Protease

Storage: 4°C, protect from light

* In solvent : -80°C, 6 months; -20°C, 1 month (protect from light)



SOLVENT & SOLUBILITY

In Vitro

DMSO : ≥ 28 mg/mL (91.47 mM)

* "≥" means soluble, but saturation unknown.

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	3.2667 mL	16.3335 mL	32.6669 mL
5 mM	0.6533 mL	3.2667 mL	6.5334 mL
10 mM	0.3267 mL	1.6333 mL	3.2667 mL

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

In Vivo

1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: ≥ 2.5 mg/mL (8.17 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: 2.5 mg/mL (8.17 mM); Suspended solution; Need ultrasonic
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (8.17 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

PD 150606 is a selective, cell-permeable non-peptide calpain inhibitor with K_i values of 0.21 μM and 0.37 μM for μ- and m-calpains respectively, which is neuroprotective[1].

IC_{50} & Target

Ki: 0.21 μM (μ-calpains), 0.37 μM (m-calpains)[1]

In Vitro

PD150606 interacts with both calcium-binding domains (μ- and m-calpains) of Calpain[1].
?PD150606 attenuates hypoxic/hypoglycemic injury to cerebrocortical neurons in culture and excitotoxic injury to Purkinje cells in cerebellar slices[1].

?PD 150606 (25 μM; 0-12 hours) reduces Cycloheximide (10 mg/ml) -triggered apoptosis of neutrophils[2].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

CUSTOMER VALIDATION

- J Hazard Mater. 24 September 2021, 127318.
- Pharmacol Res. 2022 May 19;181:106262.
- Cell Rep. 2023 Dec 2;42(12):113522.
- EMBO Rep. 2023 Feb 6;e55069.
- Toxicol Appl Pharmacol. 2023 May 26;116568.

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REFERENCES

[1]. 1. Wang KK et al. An alpha-mercaptoacrylic acid derivative is a selective nonpeptide cell-permeable calpain inhibitor and is neuroprotective. Proc Natl Acad Sci U S A. 1996 Jun 25;93(13):6687-92.

[2]. 2. Squier MK , et al. Calpain and calpastatin regulate neutrophil apoptosis. J Cell Physiol. 1999 Mar;178(3):311-9.

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