# PD150606

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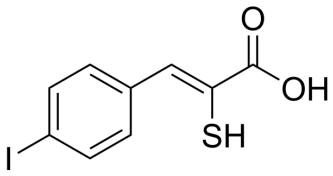
|---|---|
| **Cat. No.:** | HY-100529 |
| **CAS No.:** | 179528-45-1 |
| **Molecular Formula:** | $C_9H_7IO_2S$ |
| **Molecular Weight:** | 306.12 |
| **Target:** | Proteasome |
| **Pathway:** | Metabolic Enzyme/Protease |
| **Storage:** | 4°C, protect from light<br>* In solvent : -80°C, 6 months; -20°C, 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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