# PD168393

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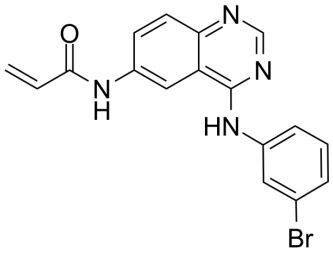
|---|---|
| **Cat. No.:** | HY-13896 |
| **CAS No.:** | 194423-15-9 |
| **Molecular Formula:** | $C_{17}H_{13}BrN_4O$ |
| **Molecular Weight:** | 369.22 |
| **Target:** | EGFR; Autophagy; Apoptosis |
| **Pathway:** | JAK/STAT Signaling; Protein Tyrosine Kinase/RTK; Autophagy; Apoptosis |
| **Storage:** | Powder -20°C 3 years<br>4°C 2 years<br>In solvent -80°C 2 years<br>-20°C 1 year |




## SOLVENT & SOLUBILITY

**In Vitro**

DMSO : ≥ 30 mg/mL (81.25 mM)

* "≥" means soluble, but saturation unknown.

**Preparing Stock Solutions**

| Solvent / Mass / Concentration | 1 mg | 5 mg | 10 mg |
|---|---|---|---|
| 1 mM | 2.7084 mL | 13.5421 mL | 27.0841 mL |
| 5 mM | 0.5417 mL | 2.7084 mL | 5.4168 mL |
| 10 mM | 0.2708 mL | 1.3542 mL | 2.7084 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 (6.77 mM); Clear solution

## BIOLOGICAL ACTIVITY

**Description**

PD168393 is a potent, selective and cell-permeable inhibitor of EGFR tyrosine kinase and ErbB2. PD168393 irreversiblely inactivates EGF receptor ( $IC_{50}$=0.7 nM) and is inactive against insulin receptor, PDGFR, FGFR and PKC[1].

**$IC_{50}$ & Target**

EGFR
0.7 nM ($IC_{50}$)

**In Vitro**

PD168393 inhibits ligand-dependent receptor phosphorylation and inhibits EGF-induced tyrosine phosphorylation in A431 cells and Heregulin-induced tyrosine phosphorylation in MDA-MB-453 cells with $IC_{50}$ values of 4.3 nM and 5.7 nM, respectively[1].

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

**In Vivo**

PD168393 (intraperitoneal injection; 58 mg/kg; once daily; days 10-14, 17-21, and 24-28) is effective in vivo, and produces tumor growth inhibition of 115% after 15 days' treatment in human epidermoid carcinoma xenografts in mice[1].

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|---|---|
| Animal Model: | A431 human epidermoid carcinoma grown as a xenograft in nude mice[1] |
| Dosage: | 58 mg/kg |
| Administration: | Intraperitoneal injection; 58 mg/kg; once daily; days 10-14, 17-21, and 24-28 |
| Result: | Suppressed the growth of human epidermoid carcinoma xenografts. |

## CUSTOMER VALIDATION

- J Cell Biochem. 2018 Mar;119(3):2911-2922.
- Biochem Cell Biol. 2022 Jan.

See more customer validations on www.MedChemExpress.com

## REFERENCES

[1]. D W Fry, et al. Specific, irreversible inactivation of the epidermal growth factor receptor and erbB2, by a new class of tyrosine kinase inhibitor. Proc Natl Acad Sci U S A. 1998 Sep 29;95(20):12022-7.



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