PND-1186

Cat. No.: HY-13917

CAS No.: 1061353-68-1

Molecular Formula: $C_{25}H_{26}F_3N_5O_3$

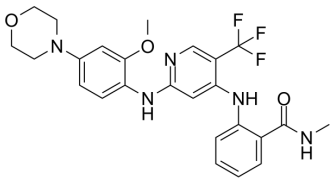
Molecular Weight: 501.5

Target: FAK; Apoptosis

Pathway: Protein Tyrosine Kinase/RTK; Apoptosis

Storage:

Powder	-20°C	3 years
	4°C	2 years
In solvent	-80°C	2 years
	-20°C	1 year



SOLVENT & SOLUBILITY

In Vitro

DMSO : ≥ 34 mg/mL (67.80 mM)

* "≥" means soluble, but saturation unknown.

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	1.9940 mL	9.9701 mL	19.9402 mL
5 mM	0.3988 mL	1.9940 mL	3.9880 mL
10 mM	0.1994 mL	0.9970 mL	1.9940 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 (4.99 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (4.99 mM); Clear solution
3. Add each solvent one by one: 5% DMSO >> 40% PEG300 >> 5% Tween-80 >> 50% saline
   Solubility: ≥ 2.5 mg/mL (4.99 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

PND-1186 (VS-4718) is a potent, highly-specific and reversible inhibitor of FAK with an IC_{50} of 1.5 nM. PND-1186 selectively promotes tumor cell apoptosis[1].

IC_{50} & Target

IC50: 1.5 nM (FAK)[1]

In Vitro

PND-1186 has an IC_{50} of ~100 nM in breast carcinoma cells as determined by anti-phospho-specific immunoblotting to FAK

Tyr-397[1].
In murine 4T1 breast carcinoma cells, FAK is important in promoting an invasive and metastatic cell phenotype. Increasing concentrations of PND-1186 (0.1 to 1.0 μM) added to 4T1 cells inhibits FAK Tyr-397 phosphorylation (pY397) and results in elevated levels of total FAK protein within 1 h[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Western Blot Analysis[1]

Cell Line:	4T1 breast carcinoma cells
Concentration:	0.1, 0.2, 0.4, 0.6 and 1.0 μM
Incubation Time:	1 hour
Result:	Inhibited FAK Tyr-397 phosphorylation (pY397) and resulted in elevated levels of total FAK protein.

In Vivo

PND-1186 (30 mg/kg or 100 mg/kg; subcutaneously; injected subcutaneously in the neck region) inhibits 4T1 subcutaneous tumor growth by induction of apoptosis[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	BALB/c mice[1]
Dosage:	30 mg/kg or 100 mg/kg
Administration:	Injected (100 μL) subcutaneously in the neck region; every 12 h (twice-daily, b.i.d.) for 5 days.
Result:	100 mg/kg treatment significantly reduced final 4T1 tumor weight 2-fold whereas 30 mg/kg treatment slightly reduced final tumor weight but was not significantly different compared to control.

CUSTOMER VALIDATION

- Cancer Cell. 2019 Mar 18;35(3):457-472.e5.
- Cancer Commun (Lond). 2023 May 31.
- Clin Cancer Res. 2019 Jul 15;25(14):4552-4566.
- J Exp Clin Cancer Res. 2022 Jun 3;41(1):193.
- Cancers (Basel). 2023 Apr 13, 15(8), 2280.

See more customer validations on www.MedChemExpress.com

REFERENCES

[1]. Tanjoni I, et al. PND-1186 FAK inhibitor selectively promotes tumor cell apoptosis in three-dimensional environments. Cancer Biol Ther. 2010 May 15;9(10):764-77.

Caution: Product has not been fully validated for medical applications. For research use only.

Tel: 609-228-6898 Fax: 609-228-5909 E-mail: tech@MedChemExpress.com
Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA