Enpp/Carbonic anhydrase-IN-2

Cat. No.: HY-151917

CAS No.: 2883495-39-2

Molecular Formula: $C_{23}H_{24}FNO_4S$

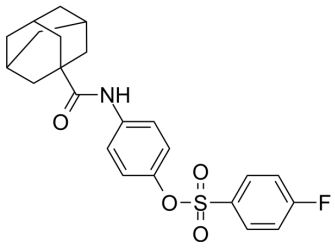
Molecular Weight: 429.5

Target: Apoptosis; Carbonic Anhydrase; Phosphodiesterase (PDE)

Pathway: Apoptosis; Metabolic Enzyme/Protease

Storage:

Powder	-20°C	3 years
	4°C	2 years
In solvent	-80°C	6 months
	-20°C	1 month



SOLVENT & SOLUBILITY

In Vitro

DMSO : 100 mg/mL (232.83 mM; Need ultrasonic)

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	2.3283 mL	11.6414 mL	23.2829 mL
5 mM	0.4657 mL	2.3283 mL	4.6566 mL
10 mM	0.2328 mL	1.1641 mL	2.3283 mL

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

In Vivo

1. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (5.82 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Enpp/Carbonic anhydrase-IN-2 (compound 1i) is a potent Enpp and carbonic anhydrase inhibitor with IC_{50}s of 1.13, 1.07, 0.74, 0.33, 0.68 for NPP1, NPP2, NPP3, CA-IX, CA-XII respectively. Enpp/Carbonic anhydrase-IN-2 shows antiproliferative activity for cancer cells and low cytotoxic against normal cells. Enpp/Carbonic anhydrase-IN-2 induces Apoptosis[1].

IC_{50} & Target

CA Ⅸ 0.33 μM (IC_{50})	CA XII 0.68 μM (IC_{50})	NPP1 1.13 μM (IC_{50})	NPP2 1.07 μM (IC_{50})
NPP3 0.74 μM (IC_{50})			

In Vitro

Enpp/Carbonic anhydrase-IN-2 (compound 1i) (0-100 μM;) inhibits some cancer cells growth with IC_{50}s of 0.58, 0.58, 0.63, 0.42, 0.20, 0.72, 0.41, 0.76, 0.94, 0.28, 0.49, 0.59, 0.83 μM for K-562, COLO 205, HCT-116, HCT-15, HT29, KM12, SW-620, SF-539,

NCI/ADR-RES, A498, PC-3, MCF7, T-47D cells, respectively[1].

Enpp/Carbonic anhydrase-IN-2 (0-2 μM) shows low cytotoxic against normal breast epithelial cells (HME1) and normal skin fibroblast cells (F180) with IC_{50}s of > 50 μM[1].

Enpp/Carbonic anhydrase-IN-2 (0.58, 1.16 μM) induces apoptosis in a dose-dependent manner at K-562 cells[1].

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

Cell Proliferation Assay[1]

Cell Line:	K-562, COLO 205, HCT-116, HCT-15, HT29, KM12, SW-620, SF-539, NCI/ADR-RES, A498, PC-3, MCF7, T-47D cells
Concentration:	0-100 μM
Incubation Time:	
Result:	Inhibited the cell growth with IC_{50}s of 0.58, 0.58, 0.63, 0.42, 0.20, 0.72, 0.41, 0.76, 0.94, 0.28, 0.49, 0.59, 0.83 μM for K-562, COLO 205, HCT-116, HCT-15, HT29, KM12, SW-620, SF-539, NCI/ADR-RES, A498, PC-3, MCF7, T-47D cells, respectively.

Apoptosis Analysis[1]

Cell Line:	K-562 cells
Concentration:	0.58, 1.16 μM
Incubation Time:	
Result:	Induced apoptosis in a dose-dependent manner.

REFERENCES

[1]. Afnan I.Shahin, et al. Design and synthesis of new adamantyl derivatives as promising antiproliferative agents. European Journal of Medicinal Chemistry, 2022.

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