BT-13

Cat. No.: HY-124401

CAS No.: 924537-98-4

Molecular Formula: $C_{23}H_{27}F_4N_3O_4S$

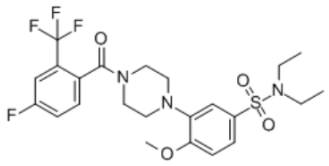
Molecular Weight: 517.54

Target: RET

Pathway: Protein Tyrosine Kinase/RTK

Storage:

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



SOLVENT & SOLUBILITY

In Vitro

DMSO : 25 mg/mL (48.31 mM; Need ultrasonic)

Preparing Stock Solutions	Concentration \ Solvent \ Mass	1 mg	5 mg	10 mg
	1 mM	1.9322 mL	9.6611 mL	19.3222 mL
	5 mM	0.3864 mL	1.9322 mL	3.8644 mL
	10 mM	0.1932 mL	0.9661 mL	1.9322 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 (4.83 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (4.83 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

BT-13 is a potent and selective glial cell line-derived neurotrophic factor (GDNF) receptor RET agonist independently of GFLs, promoting neurite growth from sensory neurons in vitro and attenuates experimental neuropathy in the Rat[1].

IC_{50} & Target

GDNF receptor RET[1].

In Vitro

BT-13 stimulates phosphorylation of RET, as well as RET-dependent intracellular signaling, but activated neither NGF receptor TrkA nor BDNF receptor TrkB nor intracellular signaling in the absence of RET[1].

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

In Vivo

BT-13 (20 and 25mg/kg in rats induced by ligation of left L5 and L6 spinal nerves) has a slight antinociceptive/antihyperalgesic effect and protected DRG neurons in rats with surgery-induced neuropathy[1].

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

Animal Model:	Rats induced by ligation of left L5 and L6 spinal nerves[1].
Dosage:	5-25 mg/kg, dissolved in sesame oil containing 5% DMSO.
Administration:	Subcutaneous injections on post-surgical day 1, 3, 5, 8, 10, and 12.
Result:	20 and 25mg/kg decreased mechanical hypersensitivity and normalized expression of sensory neuron markers in dorsal root ganglia.

REFERENCES

[1]. Sidorova YA, et al. A Novel Small Molecule GDNF Receptor RET Agonist, BT13, Promotes Neurite Growth from Sensory Neurons in Vitro and Attenuates Experimental Neuropathy in the Rat. Front Pharmacol. 2017 Jun 21;8:365.

India Contact:
Life Technologies (India) Pvt. Ltd.
306, Aggarwal City Mall, Opposite M2K Pitampura, Delhi – 110034 (INDIA). Ph: +91-11-42208000, 42208111, 42208222, Mobile: +91-9810521400, Fax: +91-11-42208444
Email: customerservice@lifetechindia.com Website: www.lifetechindia.com