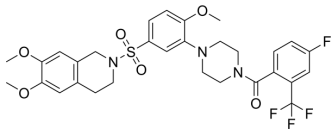
BT18

Cat. No.:	HY-111969
CAS No.:	924811-53-0
Molecular Formula:	$C_{30}H_{31}F_4N_3O_6S$
Molecular Weight:	637.64
Target:	GDNF Receptor
Pathway:	Protein Tyrosine Kinase/RTK
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 : 100 mg/mL (156.83 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	1.5683 mL	7.8414 mL	15.6828 mL
	5 mM	0.3137 mL	1.5683 mL	3.1366 mL
	10 mM	0.1568 mL	0.7841 mL	1.5683 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 (3.92 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (3.92 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

BT18 is a molecule mimic with function similar to glial cell line-derived neurotrophic factor (GDNF)[1]. BT18 shows an effect on GDNF family receptor GFRα1 and RET receptor tyrosine kinase RetA function[2].

In Vitro

BT18 (50 μM; 1-90 minutes) activates AKT and ERK1/2 in time-dependently in MG87RET cell lines[1].
BT18 (1-50 μM; 90 minutes) activates AKT in a dose-dependent manner in MG87RET cell lines[1].
BT18 (5-50 μM; 15 mimutes) appears to phosphorylate RET in concentration of 50 μM both in GFP-transfected and in GFRD1-transfected cells[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Western Blot Analysis[1]

Cell Line:	MG87RET cell lines
Concentration:	50 μM
Incubation Time:	1, 5, 15, 45, 90 minutes
Result:	Activated AKT and ERK1/2 in time-dependently.

CUSTOMER VALIDATION

- Cell Oncol. 2023 Feb 20.

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REFERENCES

[1]. Leo Jakman, Characterization of small-molecule GDNF mimics.

[2]. Ivanova L, et al. Molecular Dynamics Simulations of the Interactions between Glial Cell Line-DerivedNeurotrophic Factor Family Receptor GFRα1 and Small-Molecule Ligands. ACS Omega. 2018 Sep 30;3(9):11407-11414.

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

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