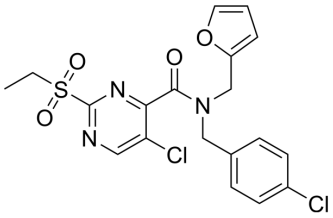
ZAP-180013

Cat. No.:	HY-136179
CAS No.:	873080-25-2
Molecular Formula:	$C_{19}H_{17}Cl_2N_3O_4S$
Molecular Weight:	454.33
Target:	Tyrosinase
Pathway:	Metabolic Enzyme/Protease
Storage:	Powder -20°C 3 years In solvent -80°C 6 months -20°C 1 month



SOLVENT & SOLUBILITY

In Vitro

DMSO : 250 mg/mL (550.26 mM; Need ultrasonic)

Preparing Stock Solutions	Mass / Solvent / Concentration	1 mg	5 mg	10 mg
	1 mM	2.2010 mL	11.0052 mL	22.0104 mL
	5 mM	0.4402 mL	2.2010 mL	4.4021 mL
	10 mM	0.2201 mL	1.1005 mL	2.2010 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: ≥ 2.08 mg/mL (4.58 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: 2.08 mg/mL (4.58 mM); Suspended solution; Need ultrasonic
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.08 mg/mL (4.58 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

ZAP-180013 is a zeta-chain-associated protein kinase 70 (ZAP-70) inhibitor with an IC_{50} of 1.8 μM. ZAP-180013 inhibits the interaction of ZAP-70 SH2 domain with immunoreceptor tyrosine-based activation motif (ITAMs)[1].

IC_{50} & Target

IC50: 1.8 μM (ZAP-70)[1]

In Vitro

ZAP-70 is a critical molecule in the transduction of T cell antigen receptor signaling and the activation of T cells. Upon activation of the T cell antigen receptor, ZAP-70 is recruited to the intracellular ζ-chains of the T cell receptor, where ZAP-70 is activated and colocalized with its substrates. Inhibitors of ZAP-70 could potentially function as treatments for

autoimmune diseases or organ transplantation. ZAP-180013 disrupts the interaction between ZAP-70 and the T cell antigen receptor. The IC_{50}s in both FP and TR-FRET assays for ZAP-180013 are 9.6 μM and 16.841 μM, respectively[1].

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

REFERENCES

[1]. Patrick R Visperas, et al. Identification of Inhibitors of the Association of ZAP-70 With the T Cell Receptor by High-Throughput Screen. SLAS Discov. 2017 Mar;22(3):324-331.

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