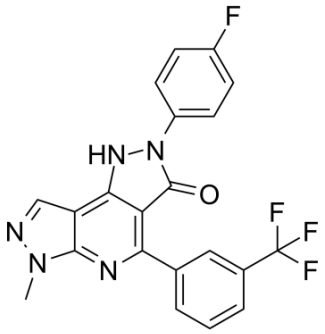
B7/CD28 interaction inhibitor 1

Cat. No.:	HY-102090
CAS No.:	635324-72-0
Molecular Formula:	$C_{21}H_{13}F_4N_5O$
Molecular Weight:	427.35
Target:	Others
Pathway:	Others

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 : 62.5 mg/mL (146.25 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	2.3400 mL	11.7000 mL	23.4000 mL
	5 mM	0.4680 mL	2.3400 mL	4.6800 mL
	10 mM	0.2340 mL	1.1700 mL	2.3400 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 (4.87 mM); Suspended solution; Need ultrasonic

BIOLOGICAL ACTIVITY

Description

B7/CD28 interaction inhibitor 1 (copmound 6b) is a potent B7.1-CD28 interaction inhibitor with an IC_{50} of 50 nM[1].

IC_{50} & Target

IC50: 50 nM (B7.1-CD28 interaction)[1]

In Vitro

Bivalent CTLA4 homodimers bridge bivalent B7.1 homodimers to form an unusually stable signaling complex. Blocking B7/CD28 interactions with monoclonal antibodies or soluble receptors results in immunosuppression and enhanced allograft survival, while B7/CTLA-4 blockade results in enhanced antitumor immune responses. The interaction of co-stimulatory molecules on T cells with B7 molecules on antigen presenting cells plays an important role in the activation of naive T cells. Consequently, agents that disrupt these interactions should have applications in treatment of transplant rejection as well as autoimmune diseases[1].

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

REFERENCES

[1]. Green NJ, et al. Structure-activity studies of a series of dipyrazolo[3,4-b:3',4'-d]pyridin-3-ones binding to the immune regulatory protein B7.1. Bioorg Med Chem. 2003 Jul 3;11(13):2991-3013.

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