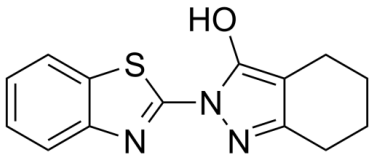
Data Sheet

Product Name:	BD750
Cat. No.:	CS-0129339
CAS No.:	892686-59-8
Molecular Formula:	$C_{14}H_{13}N_3OS$
Molecular Weight:	271.34
Target:	JAK; STAT
Pathway:	Epigenetics; JAK/STAT Signaling; Protein Tyrosine Kinase/RTK; Stem Cell/Wnt
Solubility:	DMSO : 125 mg/mL (ultrasonic)



BIOLOGICAL ACTIVITY:

BD750, an effective immunosuppressant and a **JAK3/STAT5** inhibitor, inhibits IL-2-induced JAK3/STAT5-dependent T cell proliferation, with IC_{50} values of 1.5 μM and 1.1 μM in mouse and human T cells, respectively[1][2]. ***In Vitro:*** BD750 inhibits human T cell proliferation stimulated either by anti-CD3/anti-CD28 mAbs or by alloantigen in a dose-dependent manner with IC_{50} values of 1.1 ± 0.2 μM and 1.3 ± 0.2 μM respectively[1].

BD750 also inhibits ConA, PMA/ionomycine or alloantigen-induced mouse T cell proliferation and PHA or PMA/ionomycine-induced human T cell proliferation[1].

BD750 (5 or 20 μM) inhibits the LPS-induced JAK-STAT5 signaling in DC[2]. ***In Vivo:*** BD750 can induce tolerogenic dendritic cells (tolDC) and their function in experimental autoimmune encephalitis (EAE) in mice[2].

References:

[1]. Y Liu, et al. BD750, a benzothiazole derivative, inhibits T cell proliferation by affecting the JAK3/STAT5 signalling pathway. Br J Pharmacol. 2013 Feb;168(3):632-43.

[2]. Yan Zhou, et al. Tolerogenic dendritic cells induced by BD750 ameliorate proinflammatory T cell responses and experimental autoimmune encephalitis in mice. Mol Med. 2017 Oct;23:204-214.

CAIndexNames:

2H-Indazol-3-ol, 2-(2-benzothiazolyl)-4,5,6,7-tetrahydro-

SMILES:

OC1=C2CCCCC2=NN1C3=NC4=CC=CC=C4S3

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

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