

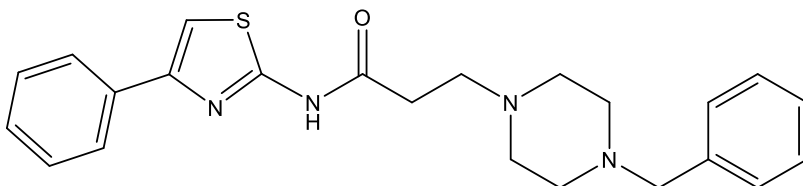
Catalog #10-4919

TJ-M2010-5

CAS# 1357471-57-8

3-(4-Benzylpiperazin-1-yl)-N-(4-phenyl-1,3-thiazol-2-yl)propanamide

Lot # FBS4047



TJ-M2010-5 is an inhibitor of the toll-like receptor (TLR)/adaptor molecule myeloid differentiation factor 88 (MyD88) signaling pathway, crucial for inflammation and associated with the development of many inflammation-related cancers.¹ It ameliorates ischemia-reperfusion injury in various organ models including brain², liver³, and heart⁴. TJ-M2010-5 also suppressed proliferation, migration, and invasion in MCF-7 and MDA-MB-231 breast cancer cells.⁵ It prevented colitis-associated colorectal cancer by impairing myeloid-derived suppressor cells.⁶

- 1) Xie *et al.* (2016), *Targeting of MyD88 Homodimerization by Novel Synthetic Inhibitor TJ-M2010-5 in Preventing Colitis-Associated Colorectal Cancer*; J. Natl. Cancer Inst. **108** djv364
- 2) Jiang *et al.* (2024), *MyD88 Inhibition Attenuates Cerebral Ischemia-reperfusion Injury by Regulating the Inflammatory Response and Reducing Blood-brain Barrier Damage*; Neuroscience **549** 121
- 3) Zou *et al.* (2023), *The Novel MyD88 Inhibitor TJ-M2010-5 Protects Against Hepatic Ischemia-reperfusion Injury by Suppressing Pyroptosis in Mice*; Transplantation **107** 392
- 4) Yang *et al.* (2022), *TJ-M2010-5 Attenuates Severe Myocardial Ischemia/Reperfusion Injury in Heart Transplantation by Inhibiting MyD88 Homodimerization In Vivo*; J. Cardiovasc. Transl. Res. **15** 1366
- 5) Liu *et al.* (2020), *The MyD88 inhibitor TJ-M2010-5 suppresses proliferation, migration and invasion of breast cancer cells by regulating MyD88/GSK-3 β and MyD88/NF- κ B signalling pathways*; Exp. Cell Res. **394** 112157
- 6) Wang *et al.* (2022), *Blockade of Myd88 signaling by a novel MyD88 inhibitor prevents colitis-associated colorectal cancer development by impairing myeloid-derived suppressor cells*; Invest. New Drugs **40** 506

PHYSICAL DATA

Molecular Weight:	406.55
Molecular Formula:	C ₂₃ H ₂₆ N ₄ OS
Purity:	>98% (HPLC)
	NMR: (Conforms)
Solubility:	DMSO (>25 mg/mL)
Physical Description:	White solid
Storage and Stability:	Store as supplied at -20°C for up to 2 years from the date of purchase. Solutions in DMSO may be stored at -20°C for up to 3 months.

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