

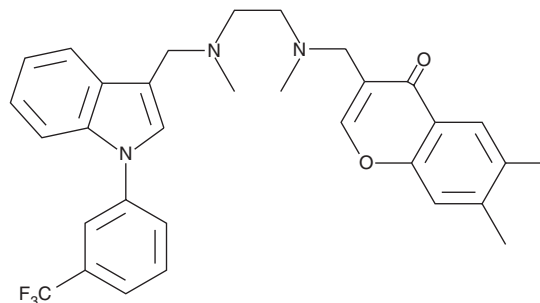
PRODUCT INFORMATION



SPD-304

Item No. 10008012

CAS Registry No.: 869998-49-2
Formal Name: 6,7-dimethyl-3-[[methyl[2-[methyl[[1-[3-(trifluoromethyl)phenyl]-1H-indol-3-yl]methyl]amino]ethyl]amino]methyl]-4H-1-benzopyran-4-one
MF: C₃₂H₃₂F₃N₃O₂
FW: 547.6
Purity: ≥98%
UV/Vis.: λ_{max}: 209, 252, 299 nm
Supplied as: A crystalline solid
Storage: -20°C
Stability: ≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

SPD-304 is supplied as a crystalline solid. A stock solution may be made by dissolving the SPD-304 in the solvent of choice, which should be purged with an inert gas. SPD-304 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of SPD-304 in DMSO is approximately 10 mg/ml and approximately 1 mg/ml in ethanol and DMF.

Description

Tumor necrosis factor α (TNF- α) is a primary mediator of many inflammatory conditions including rheumatoid arthritis, toxic shock, and sepsis.¹⁻³ TNF- α functions as a trimer and promotes receptor trimerization to activate proinflammatory and/or apoptotic signalling pathways.^{4,5} SPD-304 is an inhibitor of tumor necrosis factor α (TNF- α), that prevents binding to the TNF Receptor 1 (TNFR1) with an IC₅₀ of 22 μ M.⁶ It binds to the biologically active TNF- α trimer and promotes accelerated displacement of a single subunit to rapidly inactivate the cytokine. In a cell based assay, SPD-304 inhibited TNF- α -mediated stimulation of I κ B degradation with an IC₅₀ of 4.6 μ M.⁶

References

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2. Tracey, K.J., Beutler, B., Lowry, S.F., *et al.* Shock and tissue injury induced by recombinant human cachectin. *Science* **234(4775)**, 470-474 (1986).
3. Bidgood, M.J., Jamal, O.S., Cunningham, A.M., *et al.* Type IIA secretory phospholipase A₂ up-regulates cyclooxygenase-2 and amplifies cytokine-mediated prostaglandin production in human rheumatoid synoviocytes. *J. Immunol.* **165(5)**, 2790-2797 (2000).
4. Thornberry, N.A. and Lazebnik, Y. Caspases: Enemies within. *Science* **281(5381)**, 1312-1316 (1998).
5. Wallach, D., Varfolomeev, E.E., Malinin, N.L., *et al.* Tumor necrosis factor receptor and Fas signaling mechanisms. *Ann. Rev. Immunol.* **17**, 133-167 (1999).
6. He, M.M., Smith, A.S., Oslob, J.D., *et al.* Small-molecule inhibition of TNF α . *Science* **310**, 1022-1025 (2005).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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