

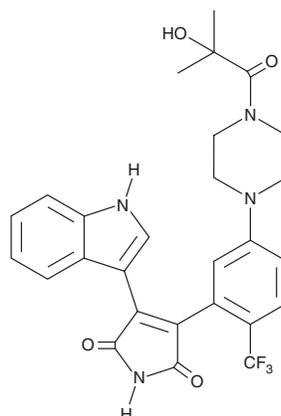
PRODUCT INFORMATION



TCS 21311

Item No. 30063

CAS Registry No.: 1260181-14-3
Formal Name: 3-[5-[4-(2-hydroxy-2-methyl-1-oxopropyl)-1-piperazinyl]-2-(trifluoromethyl)phenyl]-4-(1H-indol-3-yl)-1H-pyrrole-2,5-dione
Synonym: NIBR3049
MF: C₂₇H₂₅F₃N₄O₄
FW: 526.5
Purity: ≥95%
UV/Vis.: λ_{max}: 266 nm
Supplied as: A 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

TCS 21311 is supplied as a solid. A stock solution may be made by dissolving the TCS 21311 in the solvent of choice, which should be purged with an inert gas. TCS 21311 is soluble in the organic solvent DMSO at a concentration of approximately 50 mg/ml.

Description

TCS 21311 is an inhibitor of JAK3 (IC₅₀ = 8 nM in an enzyme assay).¹ It is selective for JAK3 over JAK1, JAK2, and tyrosine kinase 2 (TYK2; IC₅₀s = 1,017, 2,550, and 8,055 nM, respectively) but does inhibit glycogen synthase kinase 3β (GSK-3β), PKCα, and PKCθ (IC₅₀s = 13, 68, and 3 nM, respectively). TCS 21311 inhibits cytokine-induced STAT5 phosphorylation, a JAK3-dependent activity, in CTLL and M-07 cells (IC₅₀s = 1,294 and 525 nM, respectively) and inhibits TCR/CD28-mediated T cell activation, a PCK-dependent activity, in Jurkat cells (IC₅₀ = 689 nM). It also increases proliferation of mouse embryonic nephron progenitor cells (NPCs) and NPCs derived from human induced pluripotent stem cells (iPSCs) in the absence of bone morphogenic protein 7 (BMP7) when used at a concentration of 0.3 μM.²

References

1. Thoma, G., Nuninger, F., Falchetto, R., *et al.* Identification of a potent Janus kinase 3 inhibitor with high selectivity within the Janus kinase family. *J. Med. Chem.* **54**(1), 284-288 (2011).
2. Tsujimoto, H., Araoka, T., Nishi, Y., *et al.* Small molecule TCS21311 can replace BMP7 and facilitate cell proliferation in *in vitro* expansion culture of nephron progenitor cells. *Biochem. Biophys. Res. Commun.* (2020).

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.

WARRANTY AND LIMITATION OF REMEDY

Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

Copyright Cayman Chemical Company, 12/12/2022

CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD

ANN ARBOR, MI 48108 · USA

PHONE: [800] 364-9897

[734] 971-3335

FAX: [734] 971-3640

CUSTSERV@CAYMANCHEM.COM

WWW.CAYMANCHEM.COM