



Data Sheet

Research Use Only

Compound Name

TWS119

Catalog Number

SM105

Activity

TWS119 is a cell-permeable pyrrolopyrimidine compound that acts as a glycogen synthase kinase-3 β (GSK-3 β) inhibitor. TWS119 is thought to bind GSK-3 β with high-affinity and increases the level of β -catenin, a downstream substrate of GSK-3 β in the Wnt signaling pathway.

Purity

>98%

Formula

 $C_{18}H_{14}N_4O_2$

Solubility

DMSO

Alternative Names

GSK-3 β Inhibitor XII, 3-(6-(3-aminophenyl)-7H-pyrrolo[2,3-d]pyrimidin-4-yloxy)phenol

Effect

TWS119 induces neuronal differentiation in pluripotent murine embryonal carcinoma cells and embryonic stem cells (ESC). Because neuronal differentiation can be achieved without embryoid bodies (EB) formation and RA treatment, TWS119 may act by a novel mechanism on early processes involved in determining cell fate. TWS119 treatment towards hepatic stellate cells leads to reduced β -catenin phosphorylation, induces nuclear translocation of β -catenin, elevates glutamine synthetase production, impedes synthesis of smooth muscle actin and Wnt5a, but promotes the expression of glial fibrillary acidic protein, Wnt10b, and paired-like homeodomain transcription factor 2c.

CAS

601514-19-6

Molecular Weight

318.33

Stability

Stable at -20 °C. Keep away from direct sunlight.

References

1. Kordes, C., et al. 2008. Biochem Biophys Res Commun. 367(1): 116-123. PMID: 18158920
2. Ding, S., et al. 2003. Proc Natl Acad Sci U S A. 100(13): 7632-7637. PMID: 12794184
3. Forget, MA., et al. 2012. PLoS One. 7(7): e41074. PMID: 22859966
4. Ono, M., et al. 2011. Platelets. 22(3): 196-203. PMID: 21231855