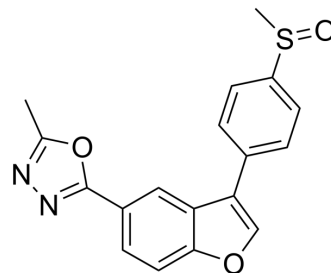


TCS2002

Cat. No.:	HY-10096
CAS No.:	1005201-24-0
Molecular Formula:	C ₁₈ H ₁₄ N ₂ O ₃ S
Molecular Weight:	338.38
Target:	GSK-3
Pathway:	PI3K/Akt/mTOR; Stem Cell/Wnt
Storage:	-20°C, protect from light, stored under nitrogen * In solvent : -80°C, 6 months; -20°C, 1 month (protect from light, stored under nitrogen)



SOLVENT & SOLUBILITY

In Vitro

DMSO : 34 mg/mL (100.48 mM; Need ultrasonic and warming)

	Solvent Concentration	Mass	1 mg	5 mg	10 mg
Preparing Stock Solutions	1 mM		2.9553 mL	14.7763 mL	29.5526 mL
	5 mM		0.5911 mL	2.9553 mL	5.9105 mL
	10 mM		0.2955 mL	1.4776 mL	2.9553 mL

Please refer to the solubility information to select the appropriate solvent.

BIOLOGICAL ACTIVITY

Description

TCS2002 (Compound 9b) is a highly selective, orally bioavailable and potent GSK-3 β inhibitor with the IC₅₀ of 35 nM. TCS2002 shows good pharmacokinetic profiles including favorable BBB penetration. TCS2002 can be used for the research of Alzheimer's disease^[1].

IC₅₀ & Target

GSK-3
35 nM (IC₅₀)

In Vivo

TCS2002 (Compound 9b) (1-3 mg/kg; 1-24 hours; GS rats and C57BL/6N mice) exhibits good pharmacokinetic profiles and favorable BBB permeability with AUC_{0-24h} value is 734 ng·h/g and K_p value (ratio of brain and plasma) is 1.6^[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	IGS rats (male, 8 weeks old) ^[1]
Dosage:	1 and 3mg/kg

Administration: Intravenous injection and oral administration;for 1, 2, 4, 8, 24 hours.

Result:

comp	(S)-9b	(S)-9c
$V_{DSS,iv}$ (mL/kg)	1134	1650
$CL_{total,iv}$ (mL/min/kg)	27.4	28.4
$C_{max,po}$ (ng/mL)	396.9	289.6
$AUC_{0-24\ h,po}$ (ng·h/mL)	1380.6	1229.1
MRT_{po} (h)	2.19	3.03
F^d (%)	72.8	65.5

REFERENCES

[1]. Morihisa Saitoh, et al. 2-[3-[4-(Alkylsulfinyl)phenyl]-1-benzofuran-5-yl]-5-methyl-1,3,4-oxadiazole derivatives as novel inhibitors of glycogen synthase kinase-3beta with good brain permeability. J Med Chem. 2009 Oct 22;52(20):6270-86.

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

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