
Product Data Sheet

Product Name: TCS 2002

Cat. No.: GC11627

Chemical Properties

Cas. No. 1005201-24-0

Chemical Name 2-methyl-5-(3-(4-(methylsulfinyl)phenyl)benzofuran-5-yl)-1,3,4-oxadiazole

SMILES O=S(C)C1=CC=C(C=C1)C2=COC3=CC=C(C4=NN=C(C)O4)C=C23Formula $C_{18}H_{14}N_2O_3S$ M.Wt 338.38

Solubility <33.84mg/ml in DMSO; <8.46mg/ml in ethanol Storage Store at -20°C

General tips For obtaining a higher solubility , please warm the tube at 37 °C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Condition Evaluation sample solution : ship with blue ice All other available size: ship with RT , or blue ice upon request.

Structure **Background**

TCS 2002 is a potent inhibitor of GSK-3 β with IC₅₀ value of 35 nM [1].

Glycogen synthase kinase 3 (GSK-3) is a serine/threonine protein kinase and functions by phosphorylating a serine or threonine residue on its target protein. GSK3 β plays an important role in neuronal cell development, energy metabolism and body pattern formation.

TCS 2002 is a potent GSK -3 β inhibitor with IC₅₀ value of 35 nM. (S) -TCS 2002 and (R) -TCS 2002 inhibited GSK-3 β with IC₅₀ values of 34 and 140 nM, respectively. TCS 2002 exhibited good bioavailability (F=40%) and solubility (38 μ g/mL). (S) -TCS 2002 showed no inhibitory activity against 12 tyrosine kinases and 10 serine/threonine kinases up to 10 μ M, indicating that (S) -TCS 2002 was a highly selective GSK -3 β inhibitor [1].

In mice, cold water stress (CWS) induced tau hyperphosphorylation at several GSK -3 β directed sites such as S199, Thr205, Thr231 and Ser396. (S) -TCS 2002 significantly

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

Tel: (909) 407-4943 Fax: (626) 353-8530 E-mail: tech@glpbio.com

Address: 10292 Central Ave. #205, Montclair, CA, USA

Product Data Sheet

inhibited tau phosphorylation by 35% [1].

Reference:

[1]. Saitoh M, Kunitomo J, Kimura E, 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, 52(20): 6270-6286.

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

Tel: (909) 407-4943 Fax: (626) 353-8530 E-mail: tech@glpbio.com

Address: 10292 Central Ave. #205, Montclair, CA, USA