



<b>Catalog Number:</b>	MC11023	<b>Product Type:</b>	Small Molecule
<b>Bio-Activity:</b>	GSK-3 inhibitor	<b>CAS #:</b>	280744-09-4
<b>Research Categories:</b>	Neuroscience, stem cells, cell death	<b>Chemical Name:</b>	3-(2,4-Dichlorophenyl)-4-(1-methyl-1H-indol-3-yl)-1H-pyrrole-2,5-dione
<b>Solubility:</b>	Soluble in DMSO (up to 25 mg/ml).	<b>Molecular Formula:</b>	C19H12Cl2N2O2
<b>Purity:</b>	> 98%	<b>Molecular Weight:</b>	371.23
<b>Format:</b>	Powder	<b>Ship Temp:</b>	Ambient
<b>Storage:</b>	Room Temperature		

### Application Notes

#### Description/Data:

SB-216763 is a potent and selective inhibitor of glycogen synthase kinase-1 (GSK-3) IC<sub>50</sub>=34.3 nM (1). It acts at the ATP-binding domain, showing protective effects in lung fibrosis mouse model (2). SB-216763 also displays neuroprotective effects on cultured neurons (3). Lastly, it had been able to maintain mouse embryonic stem cells in a pluripotent state (4).

#### References:

- 1) Coghlan et al. (2000), Selective small molecule inhibitors of glycogen synthase kinase-3 modulate glycogen metabolism and gene transcription; *Chem. Biol.*, 7 793
- 2) Gurrieri et al. (2010), 3-(2,4-dichlorophenyl)-4-(1-methyl-1H-indol-3-yl)-1H-pyrrole-2,5-dione (SB216763), a glycogen synthase kinase-3 inhibitor, displays therapeutic properties in a mouse model of pulmonary inflammation and fibrosis; *J. Pharmacol. Exp. Ther.*, 332 785
- 3) Cross et al. (2001), Selective small-molecule inhibitors of glycogen synthase kinase-3 activity protect primary neurones from death; *J. Neurochem.*, 77 94
- 4) Kirby et al. (2012), Glycogen synthase kinase 3 (GSK3) inhibitor, SB-216763, promotes pluripotency in mouse embryonic stem cells; *PLoS One*, 7 e39329

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