

# AZD1080

Catalog No: tcsc1520



## Available Sizes

Size: 5mg

Size: 10mg

Size: 50mg

Size: 100mg



## Specifications

### CAS No:

612487-72-6

### Formula:

$C_{19}H_{18}N_4O_2$

### Pathway:

Stem Cell/Wnt;PI3K/Akt/mTOR

### Target:

GSK-3;GSK-3

### Purity / Grade:

>98%

### Solubility:

DMSO : 21.35 mg/mL (63.85 mM; Need ultrasonic and warming)

### Observed Molecular Weight:

334.37

## Product Description

AZD1080 is a potent and selective **GSK3** inhibitor. AZD1080 inhibits recombinant human **GSK3 $\alpha$**  and **GSK3 $\beta$**  with **pK<sub>i</sub> (IC<sub>50</sub>)** of 8.2

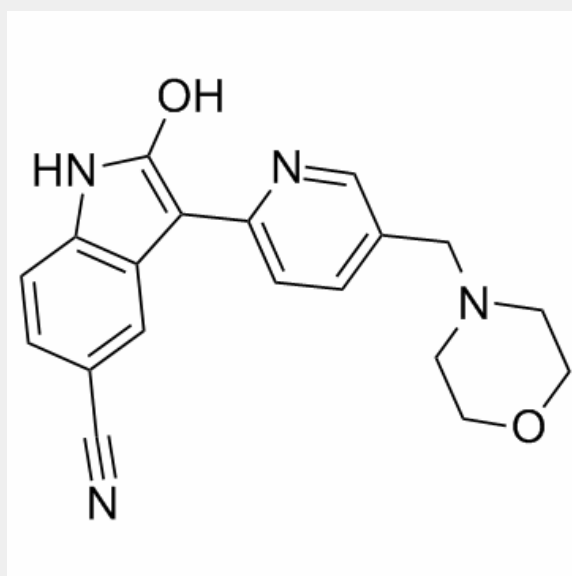
(6.9 nM) and 7.5 (31 nM), respectively.

IC<sub>50</sub> & Target: IC<sub>50</sub>: 6.9 nM (GSK3 $\alpha$ ), 31 nM (GSK3 $\beta$ )<sup>[1]</sup>

pK<sub>i</sub>: 8.2 (GSK3 $\alpha$ ), 7.5 (GSK3 $\beta$ )<sup>[1]</sup>

**In Vitro:** AZD1080 shows selectivity against cdk2 (pK<sub>i</sub>=5.9; 1150 nM; 37-fold), cdk5 (pK<sub>i</sub>=6.4; 429 nM; 14-fold), cdk1 (pK<sub>i</sub>=5.7; 1980 nM; 64-fold) and Erk2 (pK<sub>i</sub>10  $\mu$ M; >323-fold). AZD1080 (at 10  $\mu$ M) is also evaluated for pan-kinase selectivity and showed good overall selectivity versus 23 kinases, as well as against 65 different receptors, enzymes and ion channels in MDS Pharma screen (50=324 nM) and the non-selective reference GSK3 inhibitor LiCl (IC<sub>50</sub>=1.5 mM) indicating that AZD1080 is several orders of magnitude more potent than LiCl<sup>[1]</sup>.

**In Vivo:** The pharmacokinetic analysis in blood after oral administration revealed that AZD1080 has a good oral bioavailability in rats (15-24%) with a half-life of 7.1 h, making AZD1080 attractive for further in vivo testing. The subchronic (3 days) oral treatment with AZD1080 at 4 or 15  $\mu$ mol/kg significantly blocked the MK-801-induced memory deficit (AZD1080 vs. MK-801, p[1].



All products are for RESEARCH USE ONLY. Not for diagnostic & therapeutic purposes!