

# CC-401 (hydrochloride)

Catalog No: tcsc0261



## Available Sizes

**Size:** 5mg

**Size:** 10mg

**Size:** 50mg



## Specifications

**CAS No:**

1438391-30-0

**Formula:**

$C_{22}H_{25}ClN_6O$

**Pathway:**

MAPK/ERK Pathway

**Target:**

JNK

**Purity / Grade:**

>98%

**Solubility:**

10 mM in DMSO

**Alternative Names:**

CC401 HCl

**Observed Molecular Weight:**

424.93

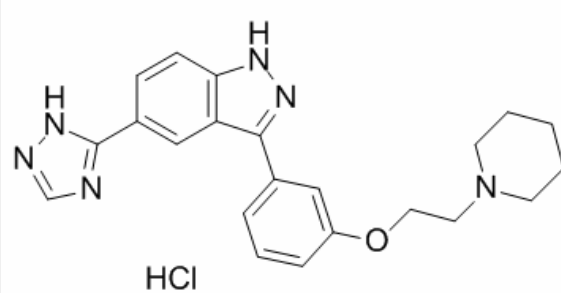
## Product Description

CC-401 hydrochloride is a potent inhibitor of all three forms of **JNK** with **K<sub>i</sub>** of 25 to 50 nM.

IC<sub>50</sub> & Target: K<sub>i</sub>: 25 to 50 nM (JNK)<sup>[1]</sup>

**In Vitro:** CC-401 has at least 40-fold selectivity for JNK compared with other related kinases, including p38, extracellular signal-regulated kinase (ERK), inhibitor of  $\kappa$ B kinase (IKK2), protein kinase C, Lck, zeta-associated protein of 70 kDa (ZAP70). In cell-based assays, 1 to 5  $\mu$ M CC-401 provides specific JNK inhibition. CC-401, a small molecule that is a specific inhibitor of all three JNK isoforms. CC-401 competitively binds the ATP binding site in JNK, resulting in inhibition of the phosphorylation of the N-terminal activation domain of the transcription factor c-Jun. The specificity of this inhibitor is tested in vitro using osmotic stress of the HK-2 human tubular epithelial cell line. CC-401 inhibits sorbitol-induced phosphorylation of c-Jun in a dosage-dependent manner. However, CC-401 does not prevent sorbitol-induced phosphorylation of JNK, p38, or ERK<sup>[1]</sup>.

**In Vivo:** The staining of p-JNK is moderately induced in bevacizumab and Oxaliplatin treatments as compared to control, and in the CC-401-treated samples p-cJun content is significantly lower, consistent with effective JNK inhibition. DNA damage is modestly elevated in combined treatments with CC-401<sup>[2]</sup>. CC-401 treatment from days 7 to 24 slows the progression of proteinuria, which is significantly reduced compared to the no-treatment and vehicle groups at days 14 and 21. However, there is still an increase in the degree of proteinuria at day 21 in CC-401-treated rats compared to proteinuria at day 5. The vehicle and no-treatment groups developed renal impairment at day 24 as shown by an increase in serum creatinine. This is prevented by CC-401 treatment<sup>[3]</sup>.



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