Web: www.taiclone.com
Tel: +886-2-2735-9682
Email: order@taiclone.com

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

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CC-401 hydrochloride is a potent inhibitor of all three forms of **JNK** with $\mathbf{K_i}$ of 25 to 50 nM.

IC50 & Target: Ki: 25 to 50 nM (JNK)[1]

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 κB kinase (IKK2), protein kinase C, Lck, zeta-associated protein of 70 kDa (ZAP70). In cell-based assays, 1 to 5 μM 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[1].

In Vivo: The staining of p-JNK is moderately induced in bevazicumab 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[2]. 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[3].