Web: www.taiclone.com
Tel: +886-2-2735-9682
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Neflamapimod

Catalog No: tcsc0195

Available Sizes

Size: 10mg

Size: 50mg

Specifications

CAS No:
209410-46-8

Formula:
$C_{19}H_9Cl_2F_2N_3OS$

Pathway:
MAPK/ERK Pathway

Target:
p38 MAPK

Purity / Grade:
>98%

Solubility:
DMSO : 13.08 mg/mL (29.98 mM; Need ultrasonic)

Alternative Names:
VX-745

Observed Molecular Weight:
436.26

Product Description

Neflamapimod (VX-745) is a potent and selective inhibitor of **p38α**, and possesses anti-inflammatory activity.

In Vitro:

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Neflamapimod (VX-745) exhibits PBMC IL-1β and TNFα IC_{50} values of 45 and 51 nM, respectively. Neflamapimod is also effective in whole blood, blocking IL-1β and TNFα release with IC_{50} values of 150 and 180 nM, respectively. Neflamapimod shows a promising selectivity profile, with 20-fold selectivity for p38α over p38β (K_i=220 nM)[1]. Neflamapimod (VX-745) solutions in DMSO/DMEM inhibits the IL-6 production with IC_{50} of 15±9 nM[2]. Neflamapimod (VX-745; 5.0 nM) displays potent activity and 1000-fold selectivity over closely related kinases, including ERK1, JNK1-3 and MK2. Neflamapimod (10 nM-50 μM) increasingly inhibits the anisomycin-induced activity of p38α[3]. Neflamapimod (VX-745; 0.06 μM-20 μM) inhibits IL-6 and VEGF secretion in BMSCs. Neflamapimod can inhibit cytokine (TNF-α, IL-6, VEGF)-induced paracrine MM cell growth, survival, and drug resistance in the BM microenvironment. Neflamapimod induces modest growth inhibition of MM.1S, RPMI8226, and U266 cell lines in a dose-dependent fashion, with inhibitory concentration of 50% (IC_{50}) of 10 μM[4].

In Vivo: Neflamapimod (VX-745; 2.5, 5, and 10 mg/kg) improves the inflammatory scores in mice by 27%, 31%, and 44%, respectively[1]. Neflamapimod (VX-745; 1.06 mg/kg) significantly decreases the inflammation score from 2.07±0.29 for the control group to 1.42±0.06[2].