

# 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

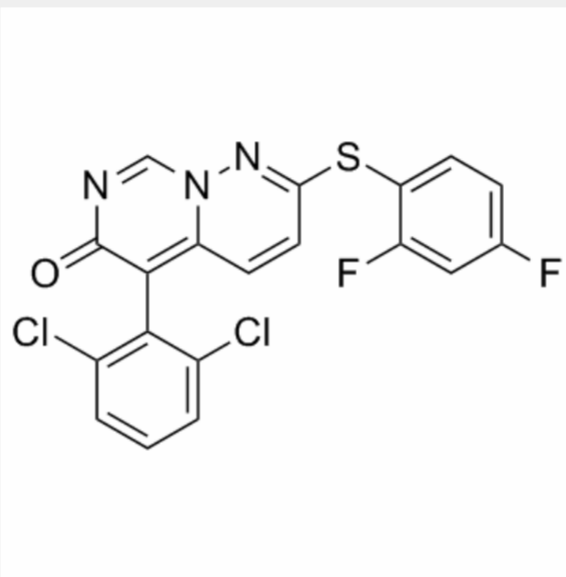
## Product Description

Neflamapimod (VX-745) is a potent and selective inhibitor of **p38 $\alpha$** , and possesses anti-inflammatory activity.

***In Vitro:***

Neflamapimod (VX-745) exhibits PBMC IL-1 $\beta$  and TNF $\alpha$  IC<sub>50</sub> values of 45 and 51 nM, respectively. Neflamapimod is also effective in whole blood, blocking IL-1 $\beta$  and TNF $\alpha$  release with IC<sub>50</sub> values of 150 and 180 nM, respectively. Neflamapimod shows a promising selectivity profile, with 20-fold selectivity for p38 $\alpha$  over p38 $\beta$  (K<sub>i</sub>=220 nM)<sup>[1]</sup>. Neflamapimod (VX-745) solutions in DMSO/DMEM inhibits the IL-6 production with IC<sub>50</sub> of 15 $\pm$ 9 nM<sup>[2]</sup>. 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  $\mu$ M) increasingly inhibits the anisomycin-induced activity of p38 $\alpha$ <sup>[3]</sup>. Neflamapimod (VX-745; 0.06  $\mu$ M-20  $\mu$ M) inhibits IL-6 and VEGF secretion in BMSCs. Neflamapimod can inhibit cytokine (TNF- $\alpha$ , 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<sub>50</sub>) of 10  $\mu$ M<sup>[4]</sup>.

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



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