

# IRAK-1-4 Inhibitor I

Catalog No: tcsc0704



## Available Sizes

**Size:** 5mg

**Size:** 10mg

**Size:** 50mg

**Size:** 100mg



## Specifications

**CAS No:**

509093-47-4

**Formula:**

$C_{20}H_{21}N_5O_4$

**Pathway:**

Immunology/Inflammation;Protein Tyrosine Kinase/RTK

**Target:**

IRAK;IRAK

**Purity / Grade:**

>98%

**Solubility:**

10 mM in DMSO

**Alternative Names:**

IRAK-1/4 Inhibitor I

**Observed Molecular Weight:**

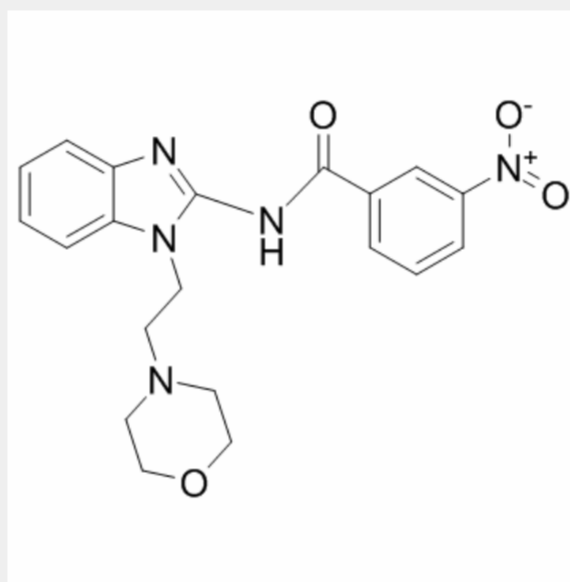
395.41

## Product Description

IRAK-1-4 Inhibitor I is a dual inhibitor of **IRAK4** and **IRAK1** with **IC<sub>50</sub>** of 0.2  $\mu$ M and 0.3  $\mu$ M, respectively.

IC50 & Target: IC50: 0.2  $\mu$ M (IRAK-4), 0.3  $\mu$ M (IRAK-1)<sup>[1]</sup>

**In Vitro:** IRAK-1-4 Inhibitor I has IC<sub>50</sub> greater than the highest concentration tested (10  $\mu$ M) against a panel of 27 other kinases, including the most closely homologous (outside of the IRAK family) Lck and pp60<sup>SRC</sup>. Additionally, IRAK-1-4 Inhibitor I does not show any signs of cytotoxicity in a 72 h proliferation assay in HeLa cells (ED<sub>50</sub>>30  $\mu$ M). Significant inhibition of IRAK-1 is observed with IRAK-1-4 Inhibitor I (IRAK-1 IC<sub>50</sub>=0.3  $\mu$ M)<sup>[1]</sup>. IRAK-1/4 inhibitor eliminates the LPS-induced increases in Bcl10, NF- $\kappa$ B, and IL-8. IRAK-1/4 mediates LPS-induced IL-8 activation and functions upstream of Bcl10. The LPS-induced increase in Bcl10 declines by 73% (from 5.18 $\pm$ 0.22 to 2.36 $\pm$ 0.08 ng/mL), and the IL-8 response decline by 60% (from 2.64 $\pm$ 0.31 to 1.14 $\pm$ 0.08 ng/mL)<sup>[2]</sup>.



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