

# Amlexanox

**Catalog No: tcsc2949**



## Available Sizes

**Size:** 10mg

**Size:** 50mg

**Size:** 100mg



## Specifications

**CAS No:**

68302-57-8

**Formula:**

$C_{16}H_{14}N_2O_4$

**Pathway:**

NF-κB

**Target:**

IKK

**Purity / Grade:**

>98%

**Solubility:**

DMSO : ≥ 36 mg/mL (120.69 mM)

**Alternative Names:**

AA673;Amoxanox;CHX3673

**Observed Molecular Weight:**

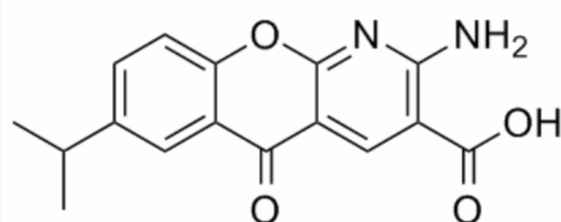
298.29

## Product Description

AmLexanox is a specific inhibitor of **IKKε** and **TBK1**, and inhibits the IKKε and TBK1 activity determined by MBP phosphorylation with an **IC<sub>50</sub>** of approximately 1-2 μM.

**In Vitro:** AmLexanox increases phosphorylation of TBK1 on Ser172 in 3T3-L1 adipocytes, and blocks polyinosinic:polycytidylic acid (poly I:C)-stimulated phosphorylation of interferon responsive factor-3 (IRF3), a presumed substrate of IKKε and TBK1<sup>[1]</sup>. AmLexanox potently inhibits the release of histamine and leukotrienes from mast cells, basophils and neutrophils in in vitro settings, possibly through increasing intracellular cyclic AMP content in inflammatory cells, a membrane-stabilising effect or inhibition of calcium influx<sup>[2]</sup>. In primary bone marrow derived macrophages (BMMs), amLexanox inhibits osteoclast formation and bone resorption. At the molecular level, amLexanox suppresses RANKL-induced activation of nuclear factor-κB (NF-κB), mitogen-activated protein kinase (MAPKs), c-Fos and NFATc1. AmLexanox decreases the expression of osteoclast-specific genes, including TRAP, MMP9, Cathepsin K and NFATc1<sup>[3]</sup>.

**In Vivo:** AmLexanox (100 mg/kg, p.o.) prevents and reverses diet-induced or genetic obesity, and produces reversible weight loss in obese mice. AmLexanox also causes a significant decrease in adipose tissue mass in these mice, and an increase in circulating adiponectin. AmLexanox (25 mg/kg) significantly improves insulin sensitivity in mice with established DIO, and after four weeks of treatment, amLexanox produces marked improvements in glucose<sup>[1]</sup>. AmLexanox before the first application of the paste and at each has been shown to suppress both immediate and evaluation thereafter. A categorical scale is also delayed-type hypersensitivity reactions<sup>[2]</sup>. AmLexanox (20 mg/kg) enhances osteoblast differentiation of BMSCs. In ovariectomized (OVX) mouse model, amLexanox prevents OVX-induced bone loss by suppressing osteoclast activity<sup>[3]</sup>.



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