For Research Use Only

Amlexanox

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Catalog Number: CM00614

产品信息

Catalog Number:
CM00614

CAS号:
68302-57-8

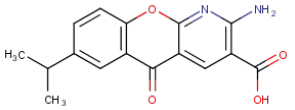
分子式:
$C_{16}H_{14}N_2O_4$

主要靶点:
FGFR|IL Receptor|Others|I κ B/IKK

主要通路:
NF- κ B 信号通路|血管生成|蛋白酪氨酸激酶|免疫与炎症

分子量:
298.29

溶解度:
DMSO:50 mg/mL (167.62 mM)



靶点活性

TBK1:1-2 μ M|IKK ε :1-2 μ M

体外活性

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 IKK ε and TBK1[1]. 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 mem-brane-stabilising effect or inhibition of calcium influx[2]. 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- κ B (NF- κ B), mitogen-activated protein kinase (MAPKs), c-Fos and NFATc1. AmLexanox decreases the expression of osteoclast-specific genes, including TRAP, MMP9, Cathepsin K and NFATc1[3].

体内活性

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[1]. 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[2]. AmLexanox (20?mg/kg) enhances osteoblast differentiation of BMSCs. In ovariectomized (OVX) mouse model, amLexanox prevents OVX-induced bone loss by suppressing osteoclast activity[3].

细胞实验

To examine cell proliferation, a Cell Counting Kit-8 is used according to the manufacturer's instructions. BMMs are seeded at a density of 5×103 cells/well in 96-well plates. After 24?hours, cells are treated with different concentrations of AmLexanox (0, 1.5, 3, 6, 12, 25? μ M) every 2 days in the presence of M-CSF (30? ng/mL) for 7 days. After 1, 3, 5 and 7 days, the culture medium is replaced by the medium containing 10% CCK-8 and cells are incubated at 37°C for an additional 2?h. The absorbance is then measured at a wavelength of 450?nm on an ELX800 absorbance microplate reader.

储存

Powder: -20°C for 3 years | In solvent: -80°C for 1 year | Shipping with blue ice.