Web: www.taiclone.com
Tel: +886-2-2735-9682
Email: order@taiclone.com

Erdosteine

Catalog No: tcsc2302

Available Sizes

Size: 1g

Size: 5g

Specifications

CAS No:
84611-23-4

Formula:
$C_8H_{11}NO_4S_2$

Pathway:
NF-κB

Target:
NF-κB

Purity / Grade:
>98%

Solubility:
10 mM in DMSO

Alternative Names:
RV 144

Observed Molecular Weight:
249.31

Product Description

Erdosteine inhibits lipopolysaccharide (LPS)-induced **NF-κB** activation.

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IC50 & Target: NF-κB[1]

In Vitro: Erdosteine is an oral mucolytic agent used as an expectorant in various chronic respiratory diseases. Erdosteine exerts anti-inflammatory effects by inhibiting NF-κB activation in LPS-stimulated mouse macrophages. However, Erdosteine does not inhibit LPS induced phosphorylation of the Akt and MAPK pathways. To evaluate the toxic effects of Erdosteine on macrophages, cell viability is analyzed. Treatment with 1, 10, or 100 μg/mL Erdosteine does not produce detectable cytotoxicity. Treatment with LPS (1 μg/mL) induced IκBα degradation in RAW 264.7 cells, and maximal degradation is observed after 10 min. RAW 264.7 cells are pretreated with the indicated concentrations of Erdosteine for 6 h and then stimulated with LPS (1 μg/mL) for 10 min. Pretreatment with Erdosteine does not have any effect on the baseline amount of IκBα. Treatment with DMSO alone at a volume equal to that used for Erdosteine delivery does not have any effect on the baseline amount of IκBα. The amount of IκBα is decreased by treatment with LPS for 10 min, and pretreatment with Erdosteine at the indicated concentration and time effectively inhibits IκBα degradation[1].

In Vivo: Twenty-six male mice are divided into four groups as follows: group 1, control; group 2, Erdosteine-treated; group 3, Methotrexate (MTX)-treated; and group 4, Methotrexate+Erdosteine treated. On the first day of experiment, a single dose of Methotrexate is intraperitoneally administered to groups 3 and 4, although a daily single dose of Erdosteine is orally administered to group 2 and 4 for 7 days. At the end of the experiment, the testes of the animals are removed and weighed. The levels of total antioxidant capacity and total oxidative stress, and myeloperoxidase activity in the Methotrexate group are higher than the control group (p[2].