

Tioxolone

Catalog No: tcsc2598



Available Sizes

Size: 1g



Specifications

CAS No:

4991-65-5

Formula:

$C_7H_4O_3S$

Pathway:

Metabolic Enzyme/Protease

Target:

Carbonic Anhydrase

Purity / Grade:

>98%

Solubility:

10 mM in DMSO

Observed Molecular Weight:

168.17

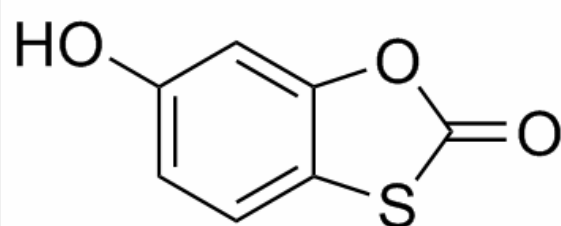
Product Description

Tioxolone, a metalloenzyme carbonic anhydrase I inhibitor, is an anti-acne preparation.

Target: Carbonic Anhydrase

Tioxolone is a metalloenzyme carbonic anhydrase I inhibitor with a K_i of 91 nM. Tioxolone lacks sulfonamide, sulfamate, or hydroxamate functional groups that are typically found in therapeutic carbonic anhydrase (CA) inhibitors, such as acetazolamide. Tioxolone is proposed to be a prodrug inhibitor that is cleaved via a CA II zinc-hydroxide mechanism known to catalyze the hydrolysis of esters. When tioxolone binds in the active site of CA II, it is cleaved and forms 4-mercaptobenzene-1,3-diol via the intermediate S-

(2,4-thiophenyl) hydrogen thiocarbonate. The esterase cleavage product binds to the zinc active site via the thiol group and is therefore the active CA inhibitor, while the intermediate is located at the rim of the active-site cavity. From Wikipedia.



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