Web: www.taiclone.com
Tel: +886-2-2735-9682
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Allopurinol

Catalog No: tcsc2166

Available Sizes

Size: 5g

Size: 10g

Specifications

CAS No:
315-30-0

Formula:
$C_5H_4N_4O$

Pathway:
Metabolic Enzyme/Protease

Target:
Xanthine Oxidase

Purity / Grade:
>98%

Solubility:
DMSO : 14 mg/mL (102.86 mM; Need ultrasonic and warming)

Observed Molecular Weight:
136.11

Product Description

Allopurinol (Zyloprim) is a xanthine oxidase inhibitor with an IC50 of 7.82±0.12 μM.

Target: XAO

Allopurinol (Zyloprim, and generics) is a drug used primarily to treat hyperuricemia (excess uric acid in blood plasma) and its complications, including chronic gout. It is a xanthine oxidase inhibitor which is administered orally. A common misconception is that

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allopurinol is metabolized by its target, xanthine oxidase, but this action is principally carried out by Aldehyde oxidase. The active metabolite of allopurinol is oxypurinol, which is also an inhibitor of xanthine oxidase. Allopurinol is almost completely metabolized to oxypurinol within two hours of oral administration, whereas oxypurinol is slowly excreted by the kidneys over 18–30 hours. For this reason, oxypurinol is believed responsible for the majority of allopurinol\'s effect.

Allopurinol is a purine analog; it is a structural isomer of hypoxanthine (a naturally occurring purine in the body) and is an inhibitor of the enzyme xanthine oxidase. In addition to blocking uric acid production, inhibition of xanthine oxidase causes an increase in hypoxanthine and xanthine. While xanthine cannot be converted to purine ribotides, hypoxanthine can be salvaged to the purine ribotides adenosine and guanosine monophosphates. Increased levels of these ribotides may cause feedback inhibition of amidophosphoribosyl transferase, the first and rate-limiting enzyme of purine biosynthesis. Allopurinol, therefore, decreases uric acid formation and may also inhibit purine synthesis.