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

Acetaminophen

Catalog No: tcsc2819

Available Sizes

Size: 5g

Size: 10g

Specifications

CAS No:
103-90-2

Formula:
$C_8H_9NO_2$

Pathway:
Immunology/Inflammation;Metabolic Enzyme/Protease

Target:
COX;Endogenous Metabolite

Purity / Grade:
>98%

Solubility:
DMSO : ≥ 100 mg/mL (661.55 mM); H2O : 10 mg/mL (66.16 mM; Need ultrasonic)

Alternative Names:
Paracetamol;4'-Hydroxyacetanilide;4-Acetamidophenol;APAP

Observed Molecular Weight:
151.16

Product Description

Acetaminophen (paracetamol) is a selective cyclooxygenase-2 (**COX-2**) inhibitor with an **IC_{50}** of 25.8 μM; is a widely used antipyretic and analgesic drug.

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IC50 & Target: IC50: 113.7 μM (COX-1), 25.8 μM (COX-2)[1]

In Vitro: *In vitro*, acetaminophen elicites a 4.4-fold selectivity toward COX-2 inhibition (IC_{50} 113.7 μM for COX-1; IC_{50} 25.8 μM for COX-2). Following oral administration of the drug, maximal *ex vivo* inhibitions are 56% (COX-1) and 83% (COX-2). Acetaminophen plasma concentrations remaine above the *in vitro* IC_{50} for COX-2 for at least 5 h postadministration. *Ex vivo* IC_{50} values (COX-1: 105.2 μM; COX-2: 26.3 μM) of acetaminophen compared favorably with its *in vitro* IC_{50} values. In contrast to previous concepts, acetaminophen inhibited COX-2 by more than 80%, i.e., to a degree comparable to nonsteroidal antiinflammatory drugs (NSAIDs) and selective COX-2 inhibitors. However, a >95% COX-1 blockade relevant for suppression of platelet function is not achieved[1].

MTT assay shows that Acetaminophen (APAP) in a dose of 50 mM significantly (p[2].

In Vivo: Administering Acetaminophen (250 mg/kg, orally) to the mice causes significant (p[3].