

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

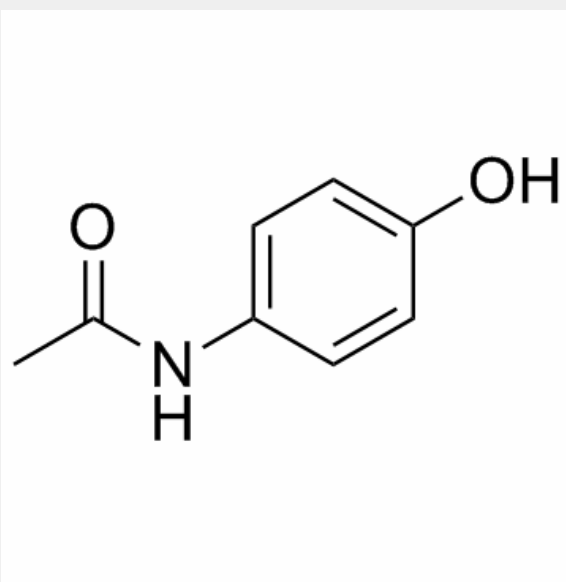
Acetaminophen (paracetamol) is a selective cyclooxygenase-2 (**COX-2**) inhibitor with an **IC₅₀** of 25.8 μ M; is a widely used antipyretic and analgesic drug.

IC₅₀ & Target: IC₅₀: 113.7 μ M (COX-1), 25.8 μ M (COX-2)^[1]

In Vitro: *In vitro*, acetaminophen elicits a 4.4-fold selectivity toward COX-2 inhibition (IC₅₀ 113.7 μ M for COX-1; IC₅₀ 25.8 μ M for COX-2). Following oral administration of the drug, maximal *ex vivo* inhibitions are 56% (COX-1) and 83% (COX-2). Acetaminophen plasma concentrations remain above the *in vitro* IC₅₀ for COX-2 for at least 5 h postadministration. *Ex vivo* IC₅₀ values (COX-1: 105.2 μ M; COX-2: 26.3 μ M) of acetaminophen compared favorably with its *in vitro* IC₅₀ 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].



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