

# Eugenol

**Catalog No: tcsc7807**



## Available Sizes

**Size:** 100mg

**Size:** 500mg



## Specifications

**CAS No:**

97-53-0

**Formula:**

$C_{10}H_{12}O_2$

**Pathway:**

Anti-infection;Anti-infection

**Target:**

Bacterial;Parasite

**Purity / Grade:**

>98%

**Solubility:**

10 mM in DMSO

**Observed Molecular Weight:**

164.2

## Product Description

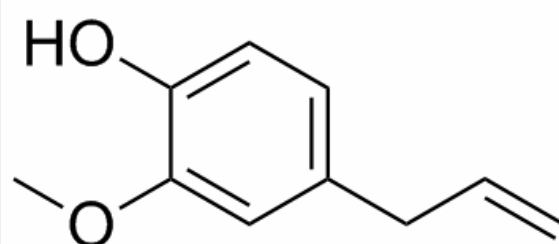
Eugenol is an essential oil found in cloves with antibacterial, anthelmintic and antioxidant activity. Eugenol is shown to inhibit lipid peroxidation.

IC50 & Target: Bacterial, Parasite<sup>[1]</sup>

**In Vitro:** The essential oil of *O. gratissimum*, as well as eugenol, are efficient in inhibiting eclodibility of *H. contortus* eggs, showing

possible utilizations in the treatment of gastrointestinal helminthiasis of small ruminants. At 0.50% concentration, the essential oil and eugenol show a maximum eclodibility inhibition<sup>[1]</sup>. Eugenol inhibits superoxide anion generation in xanthine-xanthine oxidase system to an extent of 50% at concentrations of 250  $\mu$ M. Eugenol also inhibits the generation of hydroxyl radicals to an extent of 70%. The OH-radical formation measured by the hydroxylation of salicylate to 2, 3-dihydroxy benzoate is inhibited to an extent of 46% by eugenol at 250  $\mu$ M<sup>[2]</sup>. Eugenol protects against RS-induced development of IBS-like gastrointestinal dysfunction through modulation of HPA-axis and brain monoaminergic pathways apart from its antioxidant effect. Eugenol (50 mg/kg) reduces 80% of RS-induced increase in fecal pellets similar to that of ondansetron. Eugenol attenuates 80% of stress-induced increase in plasma corticosterone and modulates the serotonergic system in the PFC and amygdala. Eugenol attenuates stress-induced changes in norepinephrine and potentiates the antioxidant defense system in all brain regions<sup>[3]</sup>.

***In Vivo:*** Eugenol (33 mg/kg) administered orally for 2 days causes significant suppression of knee joint edema, which continues to be significantly reduced at the end of the treatment. After 2 days, eugenol-treated mycobacterial arthritic rats show a marked reduction in paw swelling<sup>[4]</sup>.



All products are for RESEARCH USE ONLY. Not for diagnostic & therapeutic purposes!