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

# Genistein

## Catalog No: tcsc1534

### Available Sizes

**Size:** 1g

**Size:** 5g

**Size:** 10g

### Specifications

**CAS No:**
446-72-0

**Formula:**
$C_{15}H_{10}O_5$

**Pathway:**
JAK/STAT Signaling;Protein Tyrosine Kinase/RTK;Autophagy

**Target:**
EGFR;EGFR;Autophagy

**Purity / Grade:**
>98%

**Solubility:**
DMSO : ≥ 33 mg/mL (122.11 mM)

**Alternative Names:**
NPI 031L

**Observed Molecular Weight:**
270.24

## Product Description

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Genistein, a soy isoflavone, is a multiple **tyrosine kinases** inhibitor which acts as a chemotherapeutic agent against different types of cancer, mainly by altering apoptosis, the cell cycle, and angiogenesis and inhibiting metastasis.

IC50 & Target: IC50: 0.7 μg/mL (0.6 μM) (EGFR)[1]

***In Vitro:*** Genistein inhibits serum-stimulated growth of MCF-7 and T47D $ER^+$ cells with $IC_{50}$ values of 7.6 and 8.7 μg/mL by dye exclusion, respectively, and 8.7 and 10.6 μg/mL by [$^3$H]thymidmne incorporation, respectively. These values are similar to the $IC_{50}$ values of 9.4 and 7 μg/mL for MCF-7 and T47D $ER^+$ cells, respectively, obtained with the MTT assay. Additionally, Genistein at concentrations up to 20 μg/mL does not alter MTT mitochondrial reduction when compared to control cells in an 8 h incubation period. Furthermore, neither biochanin A or daidzein are found to interfere with the MTT assay at $IC_{50}$ concentrations. Therefore, the MTT assay is valid for determining growth inhibition by Genistein at concentrations under 20 μg/mL in the systems studied[1].

***In Vivo:*** In the present study, the effective dose of morphine caused a significant decrease in testis weight of mice compared to Saline group (p=0.00). Moreover, testis weight are significantly increase in treated animals with Genistein and Genistein plus morphine in all doses in comparison with morphine group (p=0.028). Morphine caused a significant decrease in the testosterone, LH and FSH hormones compared to saline group (p=0.00). In addition, the testosterone, LH and FSH hormones increased significantly in Genistein (p[2]. Bisphenol A (BPA) treatment alone and combined with Genistein had no significant effect on the protein expression of LC3II and PPARα in liver of STD- or HFD-fed rats (P>0.05; P>0.05). Significant decreasing of the protein expression of PPARγ in liver is observed when Genistein is added to rats, compared to either HFD group or HFD-BPA group[3].