

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

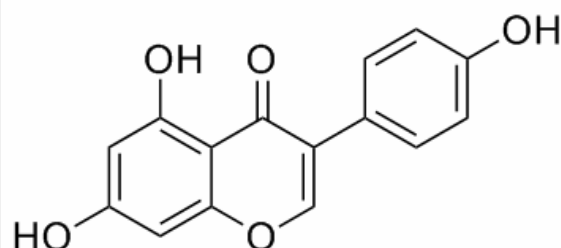
Product Description

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 IC₅₀ values of 7.6 and 8.7 µg/mL by dye exclusion, respectively, and 8.7 and 10.6 µg/mL by [³H]thymidine incorporation, respectively. These values are similar to the IC₅₀ 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 IC₅₀ 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].



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