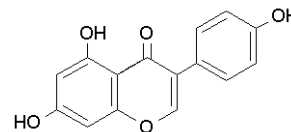


91955 Genistein (4',5,7-Trihydroxyisoflavone, 5,7-Dihydroxy-3-(4-hydroxyphenyl)-4H-1-benzopyran-4-one)

CAS number: 446-72-0

Product Description:

Molecular Formula: C₁₅H₁₀O₅
Molecular Weight: 270.2 g/mol



A DMSO solution of Genistein can be stored in aliquots and frozen until ready for use.³

Applications:

Genistein is reported to be a specific inhibitor of tyrosine-specific protein kinases, i.e., the EGF receptor kinase, pp60 v-src kinase from Rous sarcoma virus and pp110 kinase from Gardner-Arnstein feline sarcoma virus. Genistein did not inhibit the activity of serine and threonine-specific kinases such as cAMP-dependent protein kinase, protein kinase C, and phosphorylase kinase.¹

Genistein is a potent inhibitor of the mammalian facilitative hexose transporter GLUT1. In human HL-60 cells, which express GLUT1, inhibition of transport of dehydroascorbic acid, deoxyglucose, and methylglucose in a dose-dependent manner was observed. Genistein also inhibits the uptake of deoxyglucose in human erythrocytes. It did not change the uptake of leucine by HL-60 cells, which indicated that the inhibitory effect is specific for glucose transporters. The inhibitory effect of genistein was competitive with K_i approximately 12 μM for the inhibition of the transport of both methylglucose and deoxyglucose.²

Genistein partially inhibited the Na⁺-dependent Ca²⁺ uptake in primary rat cortical neuron culture, suggesting that the exchanger may be modulated by tyrosine phosphorylation. Cells were incubated with 100 μM genistein (in 1% DMSO) for one hour before the assay of Na⁺/Ca²⁺ exchange activity.³

Preparation Instructions:

Genistein is soluble at 100 mM (27 mg/ml) in DMSO.⁵ It is practically insoluble in water and soluble in dilute alkalies producing a yellow color.⁴

Precautions and Disclaimer:

For Laboratory Use Only. Not for drug, household or other uses.

References

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