Ginsenoside Rg₅
Item No. 25147

CAS Registry No.: 186763-78-0
Formal Name: (3β,12β,20E)-12-hydroxydammara-20(22),24-dien-3-yl 2-O-β-D-glucopyranosyl-β-D-glucopyranoside

MF: C₄₂H₇₀O₁₂
FW: 767.0
Purity: ≥95%
Supplied as: A crystalline solid
Storage: -20°C
Stability: ≥2 years

Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

Ginsenoside Rg₅ is supplied as a crystalline solid. A stock solution may be made by dissolving the ginsenoside Rg₅ in the solvent of choice. Ginsenoside Rg₅ is soluble in organic solvents such as DMSO and dimethyl formamide, which should be purged with an inert gas. The solubility of ginsenoside Rg₅ in these solvents is approximately 10 mg/ml.

Description

Ginsenoside Rg₅ is a ginsenoside originally isolated from P. ginseng that has diverse biological activities, including anti-cancer, anti-inflammatory, neuroprotective, and antioxidant properties.¹⁻³ It inhibits the growth of HeLa and MS751 cervical cancer cells (IC₅₀ = ~2.5-10 μM) and induces apoptosis in a concentration-dependent manner.¹ Ginsenoside Rg₅ (5 and 10 μM) inhibits LPS-induced increases in IL-1β, TNF-α, COX-2, and inducible nitric oxide synthase (iNOS) protein levels in murine alveolar macrophages.² It also inhibits LPS-induced increases in the number of neutrophils and protein levels of IL-1β, TNF-α, COX-2, and iNOS in lung in a mouse model of acute lung inflammation when administered at a dose of 10 mg/kg. In a rat model of Alzheimer’s disease induced by streptozotocin (STZ; Item No. 13104), ginsenoside Rg₅ blocks STZ-induced increases in amyloid-β accumulation in the hippocampus and cerebral cortex and prevents STZ-induced decreases in step through latency time in a passive avoidance foot-shock test in a dose-dependent manner.³

References