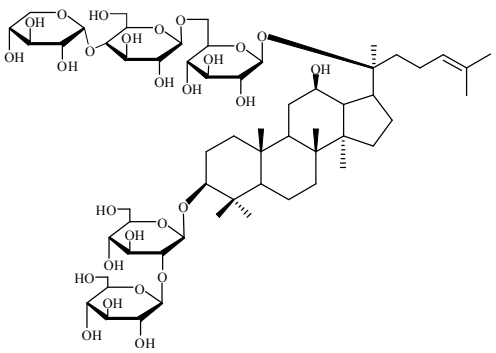
Ginsenoside-Ra$_3$ from *Panax ginseng* C.A.Mey.



Product Name: 3-*O*-[*β*-D-glucopyranosyl-(1→2)-*β*-D-glucopyranosyl]-20-*O*-[*α*-L-arabinopyranosyl-(1→6)-*β*-D-glucopyranosyl]-dammar-24-ene-3*β*,12*β*,20*S*-triol

Product Number: G016057

CAS Number: 90985-77-6

Formula (Hill method): $C_{59}H_{100}O_{27}$

Formula Weight: 1241.41 AMU

Purity(HPLC): ≥ 98.00 %

Stock Status: In Stock

Solubility: 10 mM in DMSO

Mechanisms: Pathways: Others; Target: Others

Biological Activity: Ginsenoside Ra$_3$ is extracted from roots and rhizomes of Panax ginseng, shows potent antioxidant biological activity.

IC50 Value & Target:

In Vitro: Plasma 20(S)-protopanaxadiol and 20(S)-protopanaxatriol could be used as pharmacokinetic markers to reflect the subject's microbial activities, as well as the timely-changes and interindividual differences in plasma levels of their respective oxidized metabolites. [2].

In Vivo: After ingestion of Sanchi extract, ginsenosides Ra$_3$, Rb$_1$, Rd, Rg$_1$, F$_1$, Rh$_1$, and notoginsenoside R$_1$ were measured in plasma samples. Deglycosylated metabolites Compound-K, protopanaxadiol, and protopanaxatriol were also detected in plasma. Notably, several metabolites of protopanaxadiol and protopanaxatriol were found in human plasma and characterized, the plasma concentrations of which were significantly higher than those of the circulating ginsenosides. Conclusion: Although the ginsenoside aglycones protopanaxadiol and protopanaxatriol were not contained in the test Sanqi extract, their oxidized metabolites represented a class of major circulating compounds after ingestion of the herbal extract to humans. [1].

The PK profiles of the Sanqi ginsenosides in humans were comparable to those found in rats. Slight interspecies differences could have been due to humans being relatively poor biliary excretors compared with rats.[3].

References:

[1]. Zheyi Hu, et al. Oxidation of Ginsenosides Aglycones after Oral Administration of Standardized Panax notoginseng Extract to Healthy Chinese volunteers. Drug Metab. Dispos. 2011 May;37:2290–2298.

[2].Zheyi Hu, et al. Combinatorial Metabolism Notably Affects Human Systemic Exposure to Ginsenosides from Orally Administered Extract of Panax notoginseng Roots (Sanqi). Drug metab & dispos. 2013 May; 37(1):80-6.

[3]. Feifei Du, et al. Plasma Pharmacokinetics and Urinary Excretion of Ginsenosides after Oral Administration of Panax notoginseng Extract to Human Subjects. Drug Metab. Dispos. 2009 Oct; 37: 2290C2298.

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