PRODUCT INFORMATION



Glycyrrhizic Acid (ammonium salt)

Item No. 11847

CAS Registry No.:	53956-04-0	ОН
Formal Name:	20β-carboxy-11-oxo-30-norolean-12-	° , ~ °''
	en-3β-yl 2-O-β-D-glucopyranuronosyl-	OH
	α -D-glucopyranosiduronic acid,	
	monoammonium salt	O OH
Synonyms:	Ammonium Glycyrrhizinate, Glycyrrhizin,	
	Glycyrrhizinate, NSC 2800, NSC 35348	
MF:	$C_{42}H_{62}O_{16} \bullet NH_3$	ОН
FW:	840.0	
Purity:	≥80%	но о он
UV/Vis.:	λ _{max} : 249 nm	• NH ₃
Supplied as:	A crystalline solid	i
Storage:	Room temperature	
Stability:	≥4 years	

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

Laboratory Procedures

Glycyrrhizic acid (ammonium salt) is supplied as a crystalline solid. A stock solution may be made by dissolving the glycyrrhizic acid (ammonium salt) in the solvent of choice. Glycyrrhizic acid (ammonium salt) is soluble in organic solvents such as DMSO and dimethyl formamide, which should be purged with an inert gas. The solubility of glycyrrhizic acid (ammonium salt) in these solvents is approximately 20 and 2 mg/ml, respectively.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of glycyrrhizic acid (ammonium salt) can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of glycyrrhizic acid (ammonium salt) in PBS, pH 7.2, is approximately 1 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

Glycyrrhizic acid is a natural triterpenoid saponin that can be isolated from the root of licorice. It is an agonist of the human sweet taste receptor and is used as a flavorant.¹ Glycyrrhizic acid has diverse cellular effects at low doses, including antioxidant, anti-inflammatory, antimicrobial, and antiviral actions.³⁻⁴ Presumably through its role as an antioxidant, glycyrrhizic acid alters signaling through a variety of signaling pathways, impacting pathologies such as metabolic syndrome, fibrosis, and ultraviolet-B-induced skin damage in cellular and animal models.5-7

References

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- 2. Ming, L.J. and Yin, A.C. Nat. Prod. Commun. 8(3), 415-418 (2013).
- 3. Wang, L., Yang, R., Yuan, B., et al. Acta. Pharmac. Sin. B 5(4), 310-315 (2015).
- 4. Lee, K.J., Oh, Y.C., Cho, W.K., et al. Evid. Based Complement. Alternat. Med. (2015).
- 5. Afnan, Q., Kaiser, P.J., Rafig, R.A., et al. Exp. Dermatol. 25(6), 440-446 (2016).
- 6. Cheng, H.S., Kong, J.M., Ng, A.X., et al. Nat. Prod. Bioprospect. 4(6), 325-333 (2014).
- 7. Zhou, Y., Tong, X., Ren, S., et al. J. Ethnopharmacol. 190, 83-90 (2016).

WARNING THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFFTY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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