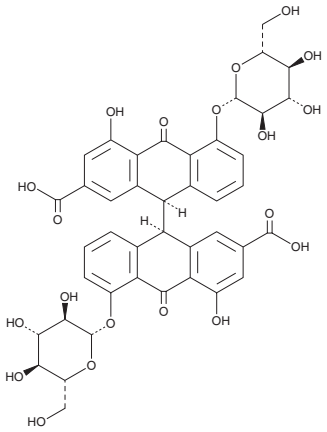
PRODUCT INFORMATION

Sennoside A

Item No. 24969



CAS Registry No.:	81-27-6
Formal Name:	(9R,9'R)-5,5'-*bis*(β-D-glucopyranosyloxy)-9,9',10,10'-tetrahydro-4,4'-dihydroxy-10,10'-dioxo-[9,9'-bianthracene]-2,2'-dicarboxylic acid
Synonym:	NSC 112929
MF:	$C_{42}H_{38}O_{20}$
FW:	862.7
Purity:	≥98%
UV/Vis.:	λ_{max}: 204 nm
Supplied as:	A crystalline solid
Storage:	-20°C
Stability:	≥4 years
Item origin:	Plant/*Sennae folium*

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

Laboratory Procedures

Sennoside A is supplied as a crystalline solid. A stock solution may be made by dissolving the sennoside A in the solvent of choice, which should be purged with an inert gas. Sennoside A is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of sennoside A in these solvents is approximately 2 and 1 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 sennoside A can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of sennoside A in PBS (pH 7.2) is approximately 1 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

Sennoside A is a dianthrone glycoside with laxative and gastroprotective activities.[1,2] *Ex vivo*, sennoside A (30 mg/kg) increases the amplitude of distal colon contractions in circular and longitudinal muscle and decreases the amplitude of proximal colon contractions in circular muscle in mice.[1] Sennoside A (100 mg/kg, oral) increases the gastric emptying rate by 71.1% compared to control and increases the intestinal transport rate of a charcoal meal from 61.2 to 81.1% in mice.[2] It increases the concentration of prostaglandin E_2 (PGE_2; Item No. 14010) in AGS gastric cells in a dose-dependent manner *in vitro*. Intraduodenal administration of sennoside A (100 mg/kg) increases gastric juice pH and decreases gastric juice secretion volume and total acid output in pylorus-ligated rats. It also reduces lesion indices by 43.1 and 36% in HCl/ethanol-induced gastritis and indomethacin-induced gastric ulcer rat models, respectively, when administered at a dose of 100 mg/kg. Sennoside A is also a non-competitive inhibitor of bovine serum monoamine oxidase *in vitro* (IC_{50} = 17 µM).[3] Formulations containing sennoside A have been used to treat constipation and to aid in evacuation of the bowel prior to surgery or invasive colonic or rectal examinations.

References

1. Kobayashi, M., Yamaguchi, T., Odaka, T., *et al. Basic Clin. Pharmacol. Toxicol.* **101(2)**, 121-126 (2007).
2. Hwang, I.Y. and Jeong, C.S. *Biomol. Ther. (Seoul)* **23(5)**, 458-464 (2015).
3. Hiraoka, A., Koike, S., Sakaguchi, S., *et al. Chem. Pharm. Bull. (Tokyo)* **37(10)**, 2744-2746 (1989).

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