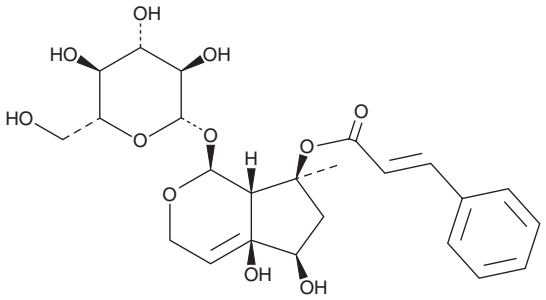
PRODUCT INFORMATION

Harpagoside

Item No. 38967

CAS Registry No.:	19210-12-9
Formal Name:	1S,4aS,5R,6,7S,7aS-hexahydro-4a,5-dihydroxy-7-methyl-7-[[(2E)-1-oxo-3-phenyl-2-propen-1-yl]oxy]cyclopenta[c]pyran-1-yl β-D-glucopyranoside
MF:	$C_{24}H_{30}O_{11}$
FW:	494.5
Purity:	≥98%
Supplied as:	A solid
Storage:	-20°C
Stability:	≥4 years
Item Origin:	Plant/*Scrophularia ningpoensis*



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

Laboratory Procedures

Harpagoside is supplied as a solid. A stock solution may be made by dissolving the harpagoside in the solvent of choice, which should be purged with an inert gas. Harpagoside is slightly soluble in acetonitrile.

Harpagoside is slightly soluble in aqueous solutions. To enhance aqueous solubility, dilute the organic solvent solution into aqueous buffers or isotonic saline. If performing biological experiments, ensure the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. We do not recommend storing the aqueous solution for more than one day.

Description

Harpagoside is an iridoid glycoside that has been found in *H. procumbens*, also known as devil's claw, and has diverse biological activities.[1-3] It inhibits LPS-induced increases in COX-2 and nitric oxide (NO) levels, as well as *TNF* mRNA expression in HepG2 cells when used at concentrations ranging from 50 to 200 µM.[1] *In vivo*, harpagoside (10 mg/kg) reduces synovial inflammation, joint destruction, and bone erosion in a mouse model of collagen-induced arthritis.[2] It also decreases substantia nigra pars compacta neuronal cell death and increases time spent on the rod in a rotarod test in a mouse model of MPTP-induced Parkinson's disease.[3]

References

1. Huang, T.H., Tran, V.H., Duke, R.K., *et al.* Harpagoside suppresses lipopolysaccharide-induced iNOS and COX-2 expression through inhibition of NF-κB activation. *J. Ethnaopharmacol.* **104(1-2)**, 149-155 (2006).
2. Kim, J.-Y., Cheon, Y.-H., Ahn, S.-J., *et al.* Harpagoside attenuates local bone erosion and systemic osteoporosis in collagen-induced arthritis in mice. *BMC Complement Med. Ther.* **22(1)**, 214 (2022).
3. Sun, X., Xiong, Z., Zhang, Y., *et al.* Harpagoside attenuates MPTP/MPP$^+$ induced dopaminergic neurodegeneration and movement disorder via elevating glial cell line-derived neurotrophic factor. *J. Neurochem.* **120(6)**, 1072-1083 (2012).

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

SAFETY 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.

WARRANTY AND LIMITATION OF REMEDY
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