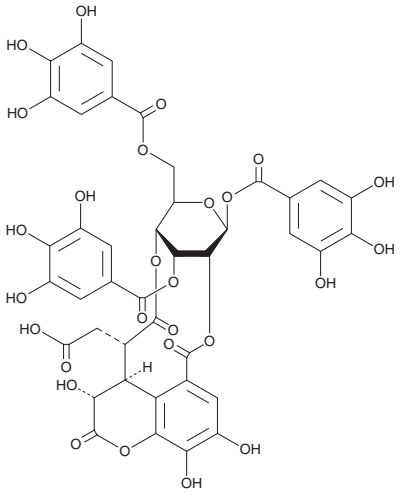
PRODUCT INFORMATION

Chebulinic Acid

Item No. 32554



CAS Registry No.:	18942-26-2
Formal Name:	1,3,6-*tris*(3,4,5-trihydroxybenzoate) cyclic 2→2:4→1-ester with (2S)-[(3R,4S)-5-carboxy-3,4-dihydro-3,7,8-trihydroxy-2-oxo-2H-1-benzopyran-4-yl]butanedioic acid, β-D-glucopyranose
Synonyms:	Eutannin, NSC 69862
MF:	$C_{41}H_{32}O_{27}$
FW:	956.7
Purity:	≥98%
UV/Vis.:	λ_{max}: 222, 283 nm
Supplied as:	A crystalline solid
Storage:	-20°C
Stability:	≥4 years
Item Origin:	Plant/Fructus Chebulae

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

Laboratory Procedures

Chebulinic acid is supplied as a crystalline solid. A stock solution may be made by dissolving the chebulinic acid in the solvent of choice, which should be purged with an inert gas. Chebulinic acid is soluble in the organic solvent ethanol.

Description

Chebulinic acid is an ellagitannin that has been found in *T. chebula* and has diverse biological activities.[1-5] It is an inhibitor of protein tyrosine phosphatase non-receptor 9 (PTPN9) and PTPN11 (IC_{50}s = 34 and 37 nM, respectively).[1] Chebulinic acid (5 µM) increases glucose uptake in 3T3-L1 preadipocytes. It induces apoptosis of HL-60 and NB4 acute promyelocytic leukemia (APL), but not K562 chronic myelogenous leukemia (CML), cells (IC_{50}s = 7.5, 5, and >60 µM, respectively).[2] Chebulinic acid (25 µM) reduces the production of reactive oxygen species (ROS) induced by glyceraldehyde-related advanced glycation end products (glycer-AGEs) in human umbilical vein endothelial cells (HUVECs) and reduces glutamate-induced ROS production and cell death in HT22 mouse hippocampal cells.[3,4] It inhibits H^+/K^+-ATPase activity (IC_{50} = 65.01 µg/ml) and reduces free and total gastric acidity, as well as increases gastric mucin secretion, in various rat models of gastric ulcer.[5]

References

1. Yoon, S.-Y., Kang, H.J., Ahn, D., *et al. Bioorg. Chem.* **90**, 103087 (2019).
2. Chhabra, S., Mishra, T., Kumar, Y., *et al. Phytother. Res.* **31(12)**, 1849-1857 (2017).
3. Lee, H.-S., Koo, Y.-C., Suh, H.J., *et al. J. Ethnopharmacol.* **131(3)**, 567-574 (2010).
4. Song, J.H., Shin, M.-S., Hwang, G.S., *et al. Bioorg. Med. Chem. Lett.* **28(3)**, 249-253 (2018).
5. Mishra, V., Agrawal, M., Onasanwo, S.A., *et al. Phytomedicine* **20(6)**, 506-511 (2013).

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