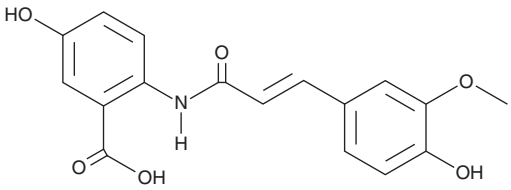
PRODUCT INFORMATION

Avenanthramide B

Item No. 46544

CAS Registry No.:	108605-69-2
Formal Name:	5-hydroxy-2-[[(2E)-3-(4-hydroxy-3-methoxyphenyl)-1 oxo-2-propen-1-yl]amino]-benzoic acid
Synonym:	AVN-B
MF:	$C_{17}H_{15}NO_6$
FW:	329.3
Purity:	≥98%
Supplied as:	A solid
Storage:	-20°C
Stability:	≥4 years
Item Origin:	Plant/Oat



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

Laboratory Procedures

Avenanthramide B is supplied as a solid. A stock solution may be made by dissolving the avenanthramide B in the solvent of choice, which should be purged with an inert gas. Avenanthramide B is soluble (≥10 mg/ml) in ethanol and DMSO.

Description

Avenanthramide B is a phenolic alkaloid that has been found in *A. sativa* and has diverse biological activities.[1-4] It inhibits porcine liver esterase, scavenges DPPH (Item No. 14805) radicals, and reduces ferric to ferrous iron in cell-free assays.[3,4] Avenanthramide B reduces hydrogen peroxide-induced DNA damage in HT-29 cells (EC_{50} = 1.6 µM).[3] It promotes glucose transporter 4 (Glut4) translocation to the plasma membrane and increases glucose uptake in a HepG2 cell model of insulin resistance induced by free fatty acids.[2]

References

1. Bratt, K., Sunnerheim, K., Bryngelsson, S., *et al.* Avenanthramides in oats (*Avena sativa* L.) and structure-antioxidant activity relationships. *J. Agric. Food Chem.* **51(3)**, 594-600 (2003).
2. Hong, S., Heo, H., Kim, H.J., *et al.* Avenanthramides ameliorate insulin resistance by modulating gluconeogenesis and glycogen synthesis in HepG2 cells. *J. Med. Chem.* **28(1)**, 18-27 (2025).
3. Lee-Manion, A.M., Price, R.K., Strain, J.J., *et al.* In vitro antioxidant activity and antigenotoxic effects of avenanthramides and related compounds. *J. Agric. Food Chem.* **57(22)**, 10619-10624 (2009).
4. Lim, H., Hwang, S., Cho, S.H., *et al.* Compared inhibitory activities of tamoxifen and avenanthramide B on liver esterase and correlation based on the superimposed structure between porcine and human liver esterase. *Int. J. Mol. Sci.* **25(24)**, 13291 (2024).

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.

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