

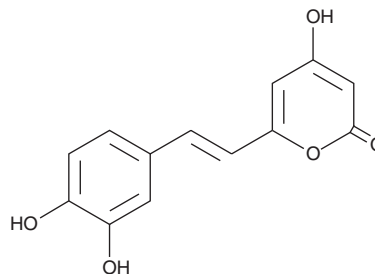
PRODUCT INFORMATION



Hispidin

Item No. 10012605

CAS Registry No.: 555-55-5
Formal Name: 6-[(1E)-2-(3,4-dihydroxyphenyl)ethenyl]-4-hydroxy-2H-pyran-2-one
MF: C₁₃H₁₀O₅
FW: 246.2
Purity: ≥95%
UV/Vis.: λ_{max}: 221, 255, 379 nm
Supplied as: A crystalline solid
Storage: -20°C
Stability: ≥4 years



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

Laboratory Procedures

Hispidin is supplied as a crystalline solid. A stock solution may be made by dissolving the hispidin in the solvent of choice, which should be purged with an inert gas. Hispidin is soluble in the organic solvent DMSO at a concentration of approximately 10 mg/ml.

Description

Hispidin is a polyphenol originally isolated from *P. hispidus* that has diverse biological activities, including antioxidant, anti-inflammatory, and cytoprotective properties.¹⁻⁴ In a trolox equivalent antioxidant capacity (TEAC) assay, hispidin scavenges radicals at 14.47 equivalents of trolox (Item No. 10011659).² It inhibits transcriptional activity of NF-κB, decreases inducible nitric oxide synthase (iNOS) expression, and decreases the generation of reactive oxygen species (ROS) in LPS-induced macrophage RAW 264.7 cells.³ Hispidin inhibits apoptosis and increases insulin secretion in hydrogen peroxide-treated RINm5F pancreatic β-cells.⁴ It inhibits protein kinase C β (PKCβ; IC₅₀ = 2 μM) with no activity against alkaline phosphatase.⁵ Hispidin also inhibits β-secretase (BACE1; IC₅₀ = 4.9 μM) and prolyl endopeptidase (PE; IC₅₀ = 16 μM) but not other serine proteases when used at a concentration of 40 μM (0.6, 0, 8.2, and 3.1% inhibition of chymotrypsin, trypsin, elastase, and tumor necrosis factor-α converting enzyme (TACE), respectively).⁶

References

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2. Zan, L.-F., Qin, J.-C., Zhang, Y.-M., et al. Antioxidant hispidin derivatives from medicinal mushroom *Inonotus hispidus*. *Chem. Pharm. Bull. (Tokyo)* **59(6)**, 770-772 (2011).
3. Shao, H.J., Joeng, J.B., Kim, K.-J., et al. Anti-inflammatory activity of mushroom-derived hispidin through blocking of NF-κB activation. *J. Sci. Food Agric.* **95(12)**, 2482-2486 (2015).
4. Jang, J.S., Lee, J.S., Lee, J.H., et al. Hispidin produced from *Phellinus linteus* protects pancreatic β-cells from damage by hydrogen peroxide. *Arch. Pharm. Res.* **33(6)**, 853-861 (2010).
5. Gonindard, C. Synthetic hispidin, a PKC inhibitor, is more cytotoxic toward cancer cells than normal cells *in vitro*. *Cell Biol. Toxicol.* **13(3)**, 141-153 (1997).
6. Park, I.-H., Jeon, S.-Y., Lee, H.-J., et al. A β-secretase (BACE1) inhibitor hispidin from the mycelial cultures of *Phellinus linteus*. *Planta Med.* **70(2)**, 143-146 (2004).

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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