

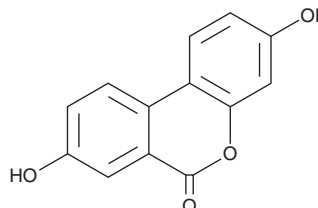
PRODUCT INFORMATION



Urolithin A

Item No. 22607

CAS Registry No.: 1143-70-0
Formal Name: 3,8-dihydroxy-6H-dibenzo[b,d]pyran-6-one
Synonyms: 2',7'-Dihydroxy-3,4-benzocoumarin,
3,8-Dihydroxy Urolithin
MF: $C_{13}H_8O_4$
FW: 228.2
Purity: $\geq 98\%$
UV/Vis.: $\lambda_{\max}$: 221, 233, 282, 308, 357 nm
Supplied as: A crystalline solid
Storage: -20°C
Stability: ≥ 2 years



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

Laboratory Procedures

Urolithin A is supplied as a crystalline solid. A stock solution may be made by dissolving the urolithin A in the solvent of choice. Urolithin A is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF), which should be purged with an inert gas. Urolithin A is slightly soluble in ethanol and has a solubility of approximately 30 mg/ml in DMSO and DMF.

Urolithin A is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, urolithin A should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. Urolithin A has a solubility of approximately 0.1 mg/ml in a 1:9 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Urolithin A is a secondary metabolite of ellagic acid (Item No. 10569), a polyphenolic antioxidant, that has antiproliferative, anti-inflammatory, and anti-oxidant properties.¹ It decreases proliferation in ECC-1, Ishikawa, and HEC-1A human endometrial cancer cell lines at a concentration of 1 μM , arrests the cell cycle at the G_2/M transition, and modulates estrogen receptor-regulated gene expression.² It also potentiates the antiproliferative effect of 5-fluorouracil (Item No. 14416) in Caco-2, SW480, and HT-29 cells.³ In a rat model of colitis, urolithin A reduces inflammation, decreasing prostaglandin E_2 (PGE_2 ; Item No. 14010) levels and preventing upregulation of COX-2 gene expression and protein levels in colonic mucosa.⁴ It also induces mitophagy in *C. elegans*, C2C12 myoblasts, and Mode-K intestinal cells in correlation with improved fitness and extended lifespan in *C. elegans* and increased exercise capacity in mice.⁵

References

1. Tomás-Barberán, F.A., González-Sarriás, A., García-Villalba, R., et al. *Mol. Nutr. Food Res.* **61**(1), (2017).
2. Zhang, W., Chen, J.-H., Aguilera-Barrantes, I., et al. *Mol. Nutr. Food Res.* **60**(11), 2387-2395 (2016).
3. González-Sarriás, A., Tomé-Carneiro, J., Bellesia, A., et al. *Food Funct.* **6**(5), 1460-1469 (2015).
4. Larrosa, M., González-Sarriás, A., Yáñez-Gascón, M.J., et al. *J. Nutr. Biochem.* **21**(8), 717-725 (2010).
5. Ryu, D., Mouchiroud, L., Andreux, P.A., et al. *Nat. Med.* **22**(8), 879-888 (2016).

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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