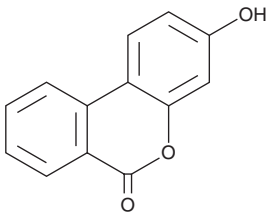
PRODUCT INFORMATION

Urolithin B

Item No. 33757

CAS Registry No.:	1139-83-9
Formal Name:	3-hydroxy-6H-dibenzo[b,d]pyran-6-one
Synonyms:	NSC 94726, 3-hydroxy Urolithin
MF:	$C_{13}H_8O_3$
FW:	212.2
Purity:	≥98%
UV/Vis.:	λ_{max}: 231, 279, 304 nm
Supplied as:	A solid
Storage:	-20°C
Stability:	≥4 years
Item Origin:	Synthetic



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

Laboratory Procedures

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

Description

Urolithin B is a metabolite of the polyphenolic antioxidant ellagic acid (Item No. 10569) that has diverse biological activities.[1-4] It is formed from ellagic acid *via* several intermediates by gut microbiota.[1] Urolithin B reduces the levels of advanced glycation end products (AGEs) in a cell-free assay in a concentration-dependent manner.[2] It inhibits aromatase activity in human placental microsomes and aromatase-sensitive MCF-7 (MCF-7aro) human breast cancer cells when used at concentrations of 47 and 4.7 µM, respectively.[3] Urolithin B (1.18-4.7 nM) inhibits testosterone-induced proliferation of MCF-7aro cells. It also inhibits LPS-induced increases in inducible nitric oxide synthase (iNOS), TNF-α, IL-6, IL-1β, and COX-2, as well as increases levels of IL-10, in BV-2 microglia when used at concentrations of 50 and 100 µM.[4]

References

1. Tomás-Barberán, F.A., González-Sarrías, A., García-Villalba, R., *et al.* Urolithins, the rescue of "old" metabolites to understand a "new" concept: Metabotypes as a nexus among phenolic metabolism, microbiota dysbiosis, and host health status. *Mol. Nutr. Food Res.* **61(1)**, (2017).
2. Liu, W., Ma, H., Frost, L., *et al.* Pomegranate phenolics inhibit formation of advanced glycation endproducts by scavenging reactive carbonyl species. *Food Funct.* **5(11)**, 2996-3004 (2014).
3. Adams, L.S., Zhang, Y., Seeram, N.P., *et al.* Pomegranate ellagitannin-derived compounds exhibit antiproliferative and antiaromatase activity in breast cancer cells *in vitro*. *Cancer Prev. Res. (Phila)* **3(1)**, 108-113 (2010).
4. Lee, G., Park, J.-S., Lee, E.-J., *et al.* Anti-inflammatory and antioxidant mechanisms of urolithin B in activated microglia. *Phytomedicine* **55**, 50-57 (2019).

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