



LKT Laboratories, Inc.

3,4-Dihydroxyphenyl Ethanol

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Product Information

Product ID D3431

CAS No. 10597-60-1

Chemical Name 2-(3,4-Dihydroxyphenyl)ethyl alcohol

Synonym 3-Hydroxytyrosol

Formula $C_8H_{10}O_3$

Formula Wt. 154.16

Melting Point

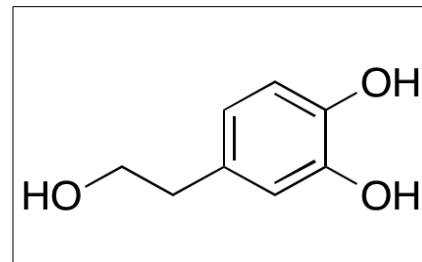
Purity $\geq 95\%$

Solubility Freely soluble in organic solvents. Slightly soluble in water (5 g/100 ml) at 25 °C.

Store Temp 4 °C

Ship Temp Ambient

Description 3,4-Dihydroxyphenol ethanol, also known as 3-hydroxytyrosol, is a polyphenol originally found in olive oil. 3-Hydroxytyrosol exhibits antioxidative, anti-inflammatory, anti-hyperlipidemic, anti-diabetic, anti-platelet, and anticancer chemotherapeutic activities. In brain slices undergoing hypoxia and reoxygenation, 3-hydroxytyrosol increases radical scavenging and glutathione activity and decreases lipid peroxidation and expression of prostaglandin E2 (PGE2) and IL-1B. 3-Hydroxytyrosol also decreases expression of prostaglandin E2 (PGE2), matrix metalloproteinase 9 (MMP9), and COX-2 through inhibition of PKC activation and NF- κ B translocation. In animal models of diabetes, 3-hydroxytyrosol inhibits SREBP/Fas signaling to decrease lipid deposits and inhibits mitochondrial apoptosis, resulting in decreases in fasting glucose, serum lipid levels, and lipid oxidation. In whole blood and plasma, this compound inhibits platelet aggregation, inhibiting production of thromboxane B2, TNF- α , and leukocyte 6-keto-PGF1. Additionally, 3-hydroxytyrosol inhibits proliferation of cholangiocarcinoma cells in vitro and inhibits tumor growth of xenografts in vivo.



Pricing and Availability

Bulk quantities available upon request

Product ID	Size	List Price
D3431	10 mg	\$118.00
D3431	25 mg	\$225.30
D3431	100 mg	\$774.80

References Garcia-Molina G, Peters E, Palmeri R, et al. Enzymatic synthesis of hydroxytyrosol from oleuropein for valorization of an agricultural waste. *Bioengineered*. 2024 Dec;15(1):2396647. PMID: 39235136.

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Cao K, Xu J, Zou X, et al. Hydroxytyrosol prevents diet-induced metabolic syndrome and attenuates mitochondrial abnormalities in obese mice. *Free Radic Biol Med*. 2013 Dec 6;67C:396-407. PMID: 24316371.

Li S, Han Z, Ma Y, et al. Hydroxytyrosol inhibits cholangiocarcinoma tumor growth: An in vivo and in vitro study. *Oncol Rep*. 2014 Jan;31(1):145-52. PMID: 24247752.

Cabrerizo S, De La Cruz JP, López-Villodres JA, et al. Role of the inhibition of oxidative stress and inflammatory mediators in the neuroprotective effects of hydroxytyrosol in rat brain slices subjected to hypoxia reoxygenation. *J Nutr Biochem*. 2013 Dec;24(12):2152-7. PMID: 24231104.

Correa JA, López-Villodres JA, Asensi R, et al. Virgin olive oil polyphenol hydroxytyrosol acetate inhibits in vitro platelet aggregation in human whole blood: comparison with hydroxytyrosol and acetylsalicylic acid. *Br J Nutr*. 2009 Apr;101(8):1157-64. PMID: 18775097.

Caution: This product is intended for laboratory and research use only. It is not for human or drug use.