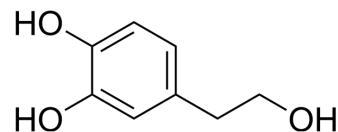


Hydroxytyrosol

| | | | |
|---------------------------|---|-------|----------|
| Cat. No.: | HY-N0570 | | |
| CAS No.: | 10597-60-1 | | |
| Molecular Formula: | C ₈ H ₁₀ O ₃ | | |
| Molecular Weight: | 154.16 | | |
| Target: | Endogenous Metabolite; Bacterial; Fungal | | |
| Pathway: | Metabolic Enzyme/Protease; Anti-infection | | |
| Storage: | Powder | -20°C | 3 years |
| | | 4°C | 2 years |
| | In solvent | -80°C | 6 months |
| | | -20°C | 1 month |



SOLVENT & SOLUBILITY

In Vitro

DMSO : 125 mg/mL (810.85 mM; Need ultrasonic)
 H₂O : 100 mg/mL (648.68 mM; Need ultrasonic)
 Ethanol : 50 mg/mL (324.34 mM; Need ultrasonic)

| Preparing Stock Solutions | Solvent Concentration | Mass | | |
|---------------------------|-----------------------|-----------|------------|------------|
| | | 1 mg | 5 mg | 10 mg |
| | 1 mM | 6.4868 mL | 32.4338 mL | 64.8677 mL |
| | 5 mM | 1.2974 mL | 6.4868 mL | 12.9735 mL |
| | 10 mM | 0.6487 mL | 3.2434 mL | 6.4868 mL |

Please refer to the solubility information to select the appropriate solvent.

In Vivo

- Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
Solubility: ≥ 2.08 mg/mL (13.49 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
Solubility: ≥ 2.08 mg/mL (13.49 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% corn oil
Solubility: ≥ 2.08 mg/mL (13.49 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Hydroxytyrosol (DOPET) is a phenolic compound with anti-oxidant, anti-atherogenic, anti-thrombotic, antimicrobial, anti-inflammatory and anti-tumour effects^{[1][2]}.

IC₅₀ & Target

Microbial Metabolite

In Vitro

Hydroxytyrosol (DOPET) shows the inhibition of pro-inflammatory cytokines (TNF- α) and reduces the expression of cyclooxygenase-2 and inducible nitric oxide synthase (iNOS) more than 60%^[1].

?Hydroxytyrosol (DOPET) modulates the transcription factor NF- κ B^[1].

?Hydroxytyrosol (DOPET) arrests the cell cycle, producing differentiation, apoptosis, or preventing DNA from oxidative stress ^[1].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

CUSTOMER VALIDATION

- Biomed Pharmacother. 2024 Mar 21:174:116439.
- Texas Journal of Agriculture and Biological Sciences. 2023 Jun 20.
- Pharmaceutics. 2022 Mar 17;14(3):663.
- Oxid Med Cell Longev. 2022.

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REFERENCES

[1]. Vilaplana-Pérez C, et al. Hydroxytyrosol and potential uses in cardiovascular diseases, cancer, and AIDS. *Front Nutr.* 2014 Oct 27;1:18.

[2]. Martínez L, et al. Hydroxytyrosol: Health Benefits and Use as Functional Ingredient in Meat. *Medicines (Basel).* 2018 Jan 23;5(1).

Caution: Product has not been fully validated for medical applications. For research use only.

Tel: 609-228-6898

Fax: 609-228-5909

E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA