

Small Molecules

Butein

NF- κ B pathway inhibitor; Stabilizes I κ B

Catalog # 73462
73464

1 mg
10 mg



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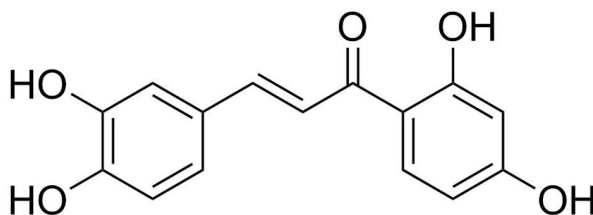
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Product Description

Butein is a plant polyphenol, tetrahydroxychalcone that inhibits nuclear factor (NF)- κ B (Yang et al; Pandey et al. 2007). Butein has been shown to prevent phosphorylation and degradation of TNF-dependent I κ B α , an inhibitory subunit of NF- κ B (IC_{50} = 38 μ M; Orlikova et al.). Butein also inhibits 5-lipoxygenase (IC_{50} = 0.01 μ M; Sogawa et al.), the enoyl-acyl-carrier protein reductase of *Plasmodium falciparum* (K_i = 2.97 μ M; Sharma et al.), angiotensin-converting enzyme (IC_{50} = 0.73 mM; Bonesi et al.), and SRC kinase (Pandey et al. 2009).

Molecular Name:	Butein
Alternative Names:	2',3,4,4'-Tetrahydroxychalcone
CAS Number:	487-52-5
Chemical Formula:	C ₁₅ H ₁₂ O ₅
Molecular Weight:	272.3 g/mol
Purity:	≥ 95%
Chemical Name:	(2E)-1-(2,4-dihydroxyphenyl)-3-(3,4-dihydroxyphenyl)-2-propen-1-one
Structure:	



Properties

Physical Appearance:	A crystalline solid
Storage:	Product stable at -20°C as supplied. Protect product from prolonged exposure to light. For long-term storage store with a desiccant. For product expiry date, please contact techsupport@stemcell.com .
Solubility:	· DMSO ≤ 70 mM · Ethanol ≤ 70 mM For example, to prepare a 10 mM stock solution in DMSO, resuspend 1 mg in 367 μ L of DMSO.

Prepare stock solution fresh before use. Information regarding stability of small molecules in solution has rarely been reported, however, as a general guide we recommend storage in DMSO at -20°C. Aliquot into working volumes to avoid repeated freeze-thaw cycles. The effect of storage of stock solution on compound performance should be tested for each application.

Compound has low solubility in aqueous media. For use as a cell culture supplement, stock solution should be diluted into culture medium immediately before use. Avoid final DMSO concentration above 0.1% due to potential cell toxicity.

Published Applications

METABOLISM

- Inhibits iron-induced lipid peroxidation in rat brain homogenate in a concentration-dependent manner (Cheng et al.).

CANCER RESEARCH

- Inhibits TNF- α -induced invasion of human lung adenocarcinoma H1299 cells (Pandey et al. 2007; Gupta et al.).
- Inhibits growth in human hepatoma cancer cell lines HepG2 and Hep3B, by inducing G2/M phase arrest (Moon et al.; Gupta et al.).
- Inhibits testosterone-induced proliferation in breast cancer cells (Wang et al.).

IMMUNOLOGY

- Exhibits anti-inflammatory properties in a mouse macrophage cell line by inhibiting LPS-induced expression of iNOS (Lee et al.).

References

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