

Product Data Sheet

Product Name: trans-Chalcone

Cat. No.: GC61896

Chemical Properties

Cas. No. 614-47-1

SMILES O=C(C1=CC=CC=C1)/C=C/C2=CC=CC=C2

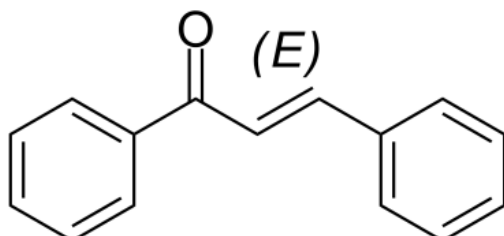
Formula $C_{15}H_{12}O$ M.Wt 208.26

Solubility Storage Store at -20°C

General tips For obtaining a higher solubility , please warm the tube at 37 °C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Condition Evaluation sample solution : ship with blue ice All other available size: ship with RT , or blue ice upon request.

Structure



Background

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

Tel: (909) 407-4943 Fax: (626) 353-8530 E-mail: tech@glpbio.com

Address: 10292 Central Ave. #205, Montclair, CA, USA

Product Data Sheet

trans-Chalcone, isolated from Aronia melanocarpa skin, is a biphenolic core structure of flavonoids precursor. trans-Chalcone is a potent fatty acid synthase (FAS) and α -amylase inhibitor. trans-Chalcone causes cellcycle arrest and induces apoptosis in the breastcancer cell line MCF-7. trans-Chalcone has antifungal and anticancer activity[1][2][3].

trans-Chalcone competitively inhibits porcine pancreatic α -amylase with a K_i of 48 μ M[2]. trans-Chalcone (30.23-98.03 μ M; 24 hours) induces cell cycle arrest and apoptosis in MCF-7 cells[1]. trans-Chalcone (20-80 μ M; 24, 48 hours) reduces the expression of the apoptosis-related protein Bcl-2[1]. trans-Chalcone (58.25 μ M; 6, 24 hours) has greater inhibition of Bcl-2, induction of APAF1 and BAX, and strong induction of CIDEA in 24 hours[1]. trans-Chalcone (24 hours) inhibits MCF-7 cell viability (IC₂₀=30.23 μ M; IC₅₀=58.25 μ M; IC₈₀=98.03 μ M). trans-Chalcone (48 h) has IC₅₀s of 41.53 μ M and 48.41 μ M for MCF-7 and 3T3 cell lines, respectively. trans-Chalcone exhibits a pronounced cytotoxicity activity[1].

References:

- [1]. Luis Felipe Buso Bortolotto, et al. Cytotoxicity of trans-chalcone and licochalcone A against breast cancer cells is due to apoptosis induction and cell cycle arrest. Biomed Pharmacother. 2017 Jan;85:425-433.
- [2]. Mahmoud Najafian, et al. Trans-chalcone: a novel small molecule inhibitor of mammalian alpha-amylase. Mol Biol Rep. 2011 Mar;38(3):1617-20.
- [3]. Tamires Aparecida Bitencourt, et al. Trans-chalcone and quercetin down-regulate fatty acid synthase gene expression and reduce ergosterol content in the human pathogenic dermatophyte Trichophyton rubrum. BMC Complement Altern Med. 2013 Sep 17;13:229.

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

Tel: (909) 407-4943 Fax: (626) 353-8530 E-mail: tech@glpbio.com

Address: 10292 Central Ave. #205, Montclair, CA, USA