2-Trifluoromethyl-2’-methoxychalcone

Item No. 11881

CAS Registry No.: 1309371-03-6
Formal Name: 1-(2-methoxyphenyl)-3-[2-((trifluoromethyl)phenyl)-2-E-propen-1-one
MF: C17H13F3O2
FW: 306.3
Purity: ≥98%
Stability: ≥1 year at -20°C
Supplied as: A solution in methyl acetate
UV/Vis: λmax 219, 288 nm

Laboratory Procedures

For long term storage, we suggest that 2-trifluoromethyl-2’-methoxychalcone be stored as supplied at -20°C. It should be stable for at least one year.

2-Trifluoromethyl-2’-methoxychalcone is supplied as a solution in methyl acetate. To change the solvent, simply evaporate the methyl acetate under a gentle stream of nitrogen and immediately add the solvent of choice. Solvents such as ethanol, DMSO, and dimethyl formamide purged with an inert gas can be used. The solubility of 2-trifluoromethyl-2’-methoxychalcone in these solvents is approximately 11, 5, and 14 mg/ml, respectively.

2-Trifluoromethyl-2’-methoxychalcone is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, the methyl acetate solution of 2-trifluoromethyl-2’-methoxychalcone should be diluted with the aqueous buffer of choice. 2-Trifluoromethyl-2’-methoxychalcone has a solubility of approximately 0.25 mg/ml in a 1:3 solution of DMF/PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Nrf2 activation is central to cytoprotective gene expression against oxidative and/or electrophilic stress.1 Unless activated by inflammatory, environmental, or oxidative stressors, Nrf2 is sequestered in the cytoplasm by its repressor, Keap1.2 Because of its protective capabilities, small molecules that activate Nrf2 signaling are being examined as potential anti-cancer or anti-inflammatory agents.3 2-Trifluoromethyl-2’-methoxychalcone is a potent activator of Nrf2, both in vitro and in mice.4 Human bronchial epithelial cells treated with 10 μM 2-trifluoromethyl-2’-methoxychalcone showed a marked increase in the expression of the Nrf2-regulated antioxidant genes, GCLM and NQO1. Furthermore, treatment of mice mice with 50 mg/kg 2-trifluoromethyl-2’-methoxychalcone leads to a 4.5- and 4.6-fold increase in the expression of GCLM and NQO1, respectively, in the small intestine compared to controls.4

References


Related Products

For a list of related products please visit: www.caymanchem.com/catalog/11881

WARNING: THIS PRODUCT IS FOR LABORATORY RESEARCH ONLY; NOT FOR ADMINISTRATION TO HUMANS. NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

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