

Nrf2/HO-1 activator 2

Chemical Properties

CAS No. :

Formula: C20H16F2O5

Molecular Weight: 374.33

Appearance: no data available

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year

Biological Description

Description	Nrf2/HO-1 activator 2 (compound 13m), a difluoro-substituted derivative, is a highly potent activator of Nrf2/HO-1. It exhibits substantial neuroprotective and antioxidant properties by activating the Nrf2/HO-1 pathway through phosphorylation of ERK1/2, JNK, or Akt in PC12 cells. This compound finds utility in the investigation of Parkinson's disease (PD) [1].
In vitro	Nrf2/HO-1 activator 2, at concentrations ranging from 0.1-30 μ M for 24 hours, offers protective effects to PC12 cells against 6-OHDA- and Rotenone-induced toxicity and cell death. At 1-100 μ M for 11 hours, it inhibits reactive oxygen species production and partially reduces lipid peroxidation in rat brain homogenates, decreasing lipid peroxide production by 28.8% at 100 μ M. Additionally, it promotes up-regulation of heme oxygenase-1 (HO-1) and Nrf2 expression and activates Nrf2/HO-1 signaling pathways through phosphorylation of ERK1/2, JNK, and Akt in PC12 cells. Cell viability assays demonstrate its neuroprotective effects, rescuing cells from rotenone-induced damage and improving cell viability up to 79.9% at 30 μ M. Western blot analysis further confirms dose-dependent upregulation of HO-1 levels and enhanced nuclear translocation of Nrf2, as well as inducing phosphorylation of ERK1/2, JNK, and Akt at 10 μ M.

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.6714 mL	13.3572 mL	26.7144 mL
5 mM	0.5343 mL	2.6714 mL	5.3429 mL
10 mM	0.2671 mL	1.3357 mL	2.6714 mL
50 mM	0.0534 mL	0.2671 mL	0.5343 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

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