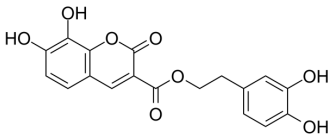
Antioxidant agent-3

Cat. No.:	HY-146172
CAS No.:	2710376-48-8
Molecular Formula:	$C_{18}H_{14}O_8$
Molecular Weight:	358.3
Target:	Reactive Oxygen Species
Pathway:	Immunology/Inflammation; Metabolic Enzyme/Protease; NF-κB
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description

Antioxidant agent-3 (Compound 14q), an potent antioxidant, displays potent DPPH radicals scavenging activity and $ABTS^+$ scavenging activity with IC_{50}s of 26.58 and 30.31 μM, respectively. Antioxidant agent-3 (Compound 14q) increases reactive oxygen species (ROS), superoxide dismutase (SOD) and glutathione (GSH), and reduced lactate dehydrogenase (LDH) in H_2O_2-treated HepG2 cells[1].

In Vitro

Antioxidant agent-3 (Compound 14q) exhibits good activity in DPPH radicals scavenging and ABTS +• scavenging with the values of IC_{50} is 26.58 μM and 30.31 μM respectively[1].
Antioxidant agent-3 shows low cytotoxicity in human normal WI-38 (IC_{50} > 100 μM) and GES (IC_{50} > 200 μM) cells[1].
Antioxidant agent-3 can enhance viability of H_2O_2-induced HepG2 cells[1].
Antioxidant agent-3 decreases the apoptotic percentage of HepG2 cells[1].
Antioxidant agent-3 reduces the ROS produce and LDH release, improves GSH and SOD levels in H_2O_2-treated HepG2 cells, and exhibits more stability in methanol solution[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Cell Cytotoxicity Assay[1]

Cell Line:	WI-38 and GES cells line
Concentration:	200, 100, 50, 25 and 12.5 μM
Incubation Time:	48 h
Result:	Showed less toxicity in hemolysis assay and weaker antiproliferative effects.

Cell Viability Assay[1]

Cell Line:	H_2O_2-damaged WI-38 and HepG2 cells
Concentration:	50, 25 and 12.5 μM
Incubation Time:	1 h
Result:	Increased cells viability of H2O2-indcued cells and protected the H2O2-indcued cells against injury.

Apoptosis Analysis[1]

Cell Line:	H_2O_2-damaged HepG2 cells
Concentration:	50, 25 and 12.5 μM
Incubation Time:	1 h
Result:	Protect the H_2O_2-injured HepG2 cells against apoptosis through antioxidant effect.

REFERENCES

[1]. Wen-Bo Li, et al.Synthesis and antioxidant activity of conjugates of hydroxytyrosol and coumarin. Bioorg Chem. 2020 Dec;105:104427.

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