Oleuropein

Small Molecules

PPARy antagonist

STEMCELLTM TECHNOLOGIES

Scientists Helping Scientists™ | www.stemcell.com

TOLL FREE PHONE 1 800 667 0322 • PHONE +1 604 877 0713 INFO@STEMCELL.COM • TECHSUPPORT@STEMCELL.COM FOR GLOBAL CONTACT DETAILS VISIT OUR WEBSITE

Catalog #100-0256 100-0258 25 mg 100 mg

Product Description

Oleuropein is the primary phenolic compound found in olives and olive oil, and it exhibits antioxidant, anti-inflammatory, and anti-cancer properties (Sun et al.).

Molecular Name: Oleuropein

Alternative Names: Not applicable

CAS Number: 32619-42-4Chemical Formula: $C_{25}H_{32}O_{13}$ Molecular Weight: 540.5 g/mol

Purity: $\geq 98\%$

Chemical Name: (2S,3E,4S)-3-ethylidene-2-(β-D-glucopyranosyloxy)-3,4-dihydro-5-(methoxycarbonyl)-2H-pyran-4-acetic acid,

2-(3,4-dihydroxyphenyl)ethyl ester

Structure:

Properties

Physical Appearance: A crystalline solid

Storage: Product stable at -20°C as supplied. Protect from prolonged exposure to light. For long-term storage store with a

desiccant. Stable as supplied for 12 months from date of receipt.

Solubility: $\cdot PBS \le 460 \mu M$

· DMSO ≤ 55 mM

· Absolute ethanol ≤ 55 mM

For example, to prepare a 10 mM stock solution in DMSO, resuspend 10 mg in 1.85 mL 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.

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.

Small Molecules

Oleuropein



Published Applications

DIFFERENTIATION

- · Decreases adipocyte differentiation and increases osteoblast differentiation in mesenchymal stem cells (Santiago-Mora et al.). CANCER RESEARCH
- · Inhibits proliferation and induces apoptosis in MCF-7 human breast cancer cells (Han et al.).

References

Han J et al. (2009) Anti-proliferative and apoptotic effects of oleuropein and hydroxytyrosol on human breast cancer MCF-7 cells. Cytotechnology 59(1): 45–53.

Santiago-Mora R et al. (2011) Oleuropein enhances osteoblastogenesis and inhibits adipogenesis: the effect on differentiation in stem cells derived from bone marrow. Osteoporos Int 22(2): 675–84.

Sun W et al. (2017) Oleuropein, unexpected benefits! Oncotarget 8(11): 17409.

Related Small Molecules

For a complete list of small molecules available from STEMCELL Technologies, visit www.stemcell.com/smallmolecules or contact us at techsupport@stemcell.com.

PRODUCTS ARE FOR RESEARCH USE ONLY AND NOT INTENDED FOR HUMAN OR ANIMAL DIAGNOSTIC OR THERAPEUTIC USES UNLESS OTHERWISE STATED.

Copyright © 2020 by STEMCELL Technologies Inc. All rights reserved including graphics and images. STEMCELL Technologies & Design, STEMCELL Shield Design, and Scientists Helping Scientists are trademarks of STEMCELL Technologies Canada Inc. All other trademarks are the property of their respective holders. While STEMCELL has made all reasonable efforts to ensure that the information provided by STEMCELL and its suppliers is correct, it makes no warranties or representations as to the accuracy or completeness of such information.