Revision 1

Store at -20C

#35333

CDDO-Me

5 mg

Cell Signaling TECHNOLOGY®

Orders: 877-616-CELL (2355) orders@cellsignal.com

Support: 877-678-TECH (8324)

Web: info@cellsignal.com cellsignal.com

3 Trask Lane | Danvers | Massachusetts | 01923 | USA

For Research Use Only. Not for Use in Diagnostic Procedures.

Background

CDDO-Me (bardoxolone methyl) is a synthetic triterpenoid that induces apoptosis and differentiation in cancer cells, and exhibits strong antiproliferative and antiangiogenic activities (1). CDDO-Me activates nuclear factor-like 2 (NRF2) transcriptional activator, which regulates oxidative stress response gene expression through binding of antioxidant response element (ARE) promoter gene regions. CDDO-Me interacts with the NRF2 inhibitor INrf2 (also called KEAP1), resulting in the release of NRF2 from the proteasome pathway and translocation of NRF2 into the nucleus (2). Additionally, CDDO-Me binds IKKβ to block the targeting of NF-κB p65 to the nucleus and inhibits NF-κB activation and downstream pro-inflammatory signaling pathways (3). CDDO-Me has been studied as an anticancer and anti-inflammatory drug, with potential to treat patients with chronic kidney disease associated with diabetes (4). Low doses of CDDO-Me may exert therapeutic effects on cardiac function in models of chronic heart failure (5).

Molecular Formula

$C_{32}H_{43}NO_4$

Molecular Weight

505.7 g/mol

Purity

>98%

CAS

218600-53-4

Solubility

Soluble in DMSO at 25 mg/mL.

Storage

Store lyophilized at -20ºC, desiccated. In lyophilized form, the chemical is stable for 24 months. Once in solution, store at -20ºC and use within 3 months to prevent loss of potency. *Aliquot to avoid multiple freeze/thaw cycles*.

Directions for Use

CDDO-Me is supplied as a lyophilized powder. For a 10 mM stock, reconstitute 5 mg of powder in 0.99 mL of DMSO. Working concentrations and length of treatment can vary depending on the desired effect.

Background References

1. Borella, R. et al. (2019) *Molecules* 24, 4097. doi: 10.3390/molecules24224097.
2. Liby, K.T. and Sporn, M.B. (2012) *Pharmacol Rev* 64, 972-1003.
3. Wang, Y.Y. et al. (2014) *Drug Des Devel Ther* 8, 2075-88.
4. Kanda, H. and Yamawaki, K. (2020) *Clin Exp Nephrol* 24, 857-864.
5. Tian, C. et al. (2019) *J Pharmacol Exp Ther* 371, 642-651.

Trademarks and Patents

Limited Uses

attempt to discover the underlying structure or technology of the Products, or use the Products for the purpose of developing any products or services that would compete with CST products or services, (c) not alter or remove from the Products any trademarks, trade names, logos, patent or copyright notices or markings, (d) use the Products solely in accordance with CST Product Terms of Sale and any applicable documentation, and (e) comply with any license, terms of service or similar agreement with respect to any third party products or services used by Customer in connection with the Products.