

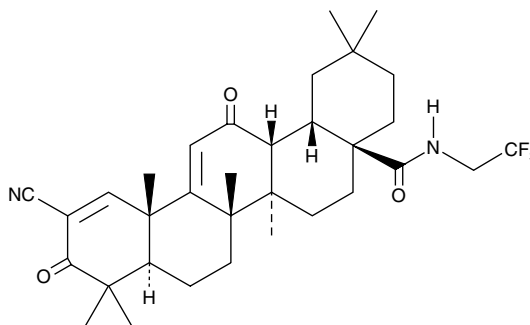
Product Information



CDDO-TFEA

Item No. 90001845

CAS Registry No.: 932730-52-4
Formal Name: 2-cyano-3,12-dioxo-N-(2,2,2-trifluoroethyl)-oleana-1,9(11)-dien-28-amide
Synonyms: CDDO-Trifluoroethyl Amide, RTA 404, TP-500
MF: C₃₃H₄₃F₃N₂O₃
FW: 572.7
Purity: ≥95%
Stability: ≥2 years at -20°C
Supplied as: A crystalline solid
UV/Vis.: λ_{max}: 239, 340 nm



Laboratory Procedures

For long term storage, we suggest that CDDO-TFEA be stored as supplied at -20°C. It should be stable for at least two years.

CDDO-TFEA is supplied as a crystalline solid. A stock solution may be made by dissolving the CDDO-TFEA in the solvent of choice. CDDO-TFEA is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide, which should be purged with an inert gas. The solubility of CDDO-TFEA in these solvents is approximately 5 mg/ml.

CDDO-TFEA is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, CDDO-TFEA should first be dissolved in ethanol and then diluted with the aqueous buffer of choice. CDDO-TFEA has a solubility of approximately 0.5 mg/ml in a 1:1 solution of ethanol:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

The synthetic oleanane triterpenoid CDDO (Item No. 81035) is a Nrf2 activator that inhibits proliferation and induces differentiation and apoptosis in various cancer cells. CDDO-TFEA is a trifluoroethylamide derivative of CDDO with enhanced ability to cross the blood brain barrier. It has been shown to enhance Nrf2 expression and signaling in various models of neurodegeneration, including those that simulate multiple sclerosis, amyotrophic lateral sclerosis, and Huntington's disease.¹⁻³ CDDO-TFEA induces apoptosis of Ewing's sarcoma and neuroblastoma cell lines, preventing colony formation at IC₅₀ values ranging from 85-170 nM.⁴

References

1. Pareek, T.K., Belkadi, A., Kesavapany, S., *et al.* Triterpenoid modulation of IL-17 and Nrf-2 expression ameliorates neuroinflammation and promotes remyelination in autoimmune encephalomyelitis. *Sci. Rep.* **1**, 201 (2011).
2. Neymotin, A., Calingasan, N.Y., Wille, E., *et al.* Neuroprotective effect of Nrf2/ARE activators, CDDO-ethylamide and CDDO-trifluoroethylamide, in a mouse model of amyotrophic lateral sclerosis. *Free Radic. Biol. Med.* **51(1)**, 88-96 (2011).
3. Stack, C., Ho, D., Wille, E., *et al.* Triterpenoids CDDO-ethyl amide and CDDO-trifluoroethyl amide improve the behavioral phenotype and brain pathology in a transgenic mouse model of Huntington's disease. *Free Radic. Biol. Med.* **49(2)**, 147-158 (2010).
4. Alabran, J.L., Cheuk, A., Liby, K., *et al.* Human neuroblastoma cells rapidly enter cell cycle arrest and apoptosis following exposure to C-28 derivatives of the synthetic triterpenoid CDDO. *Cancer Biol. Ther.* **7(5)**, 709-717 (2008).

Related Products

For a list of related products please visit: www.caymanchem.com/catalog/90001845

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

SAFETY DATA

This material should be considered hazardous until information to the contrary becomes available. Do not ingest, swallow, or inhale. Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling. This information contains some, but not all, of the information required for the safe and proper use of this material. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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