Product Datasheet

CDDO-TFEA

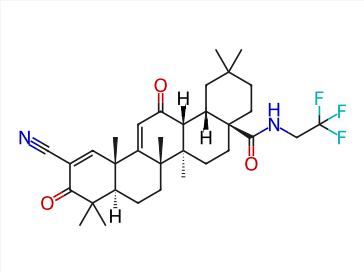
Catalog No. **BP-02108** · CAS **932730-52-4** · Form **free base** · Physical state **other** · Color **White to off-white** · Version **1.0** · Revision **2026-09-14**

FOR RESEARCH USE ONLY. NOT FOR HUMAN OR VETERINARY USE.

Target	Research area
Keap1-Nrf2; Apoptosis	**Cancer**

Molecular formula	$C_{33}H_{43}F_3N_2O_3$
Molecular weight	**572.7013**

STRUCTURE



DESCRIPTION

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. CDDO-TFEA induces apoptosis of Ewing's sarcoma and neuroblastoma cell lines, preventing colony formation at IC50 values ranging from 85-170 nM.

BIOLOGICAL ACTIVITY

CDDO-TFEA (RTA 404; TP-500) is a trifluoroacetamide derivative of CDDO with enhanced ability to cross the blood-brain barrier. CDDO is an Nrf2 activator that inhibits proliferation and induces differentiation and apoptosis in various cancer cells. CDDO-TFEA can enhance Nrf2 expression and signaling in various neurodegenerative disease models.

CDDO-TFEA induces apoptosis and blocks colony formation in Ewing's sarcoma and neuroblastoma cell lines with IC50 values ranging of 85-170 nM.

SOLUBILITY

Soluble in DMSO

In vitro	DMSO : 8.33 mg/mL

REFERENCES

[1]. Stack, 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).