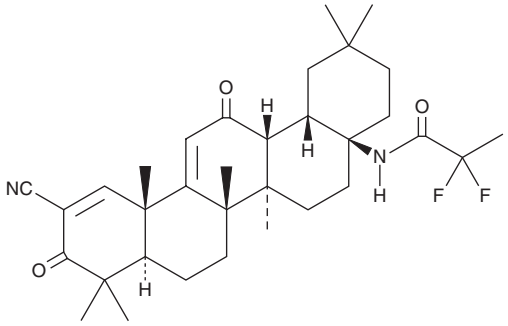
PRODUCT INFORMATION

RTA 408

Item No. 17854

CAS Registry No.:	1474034-05-3
Formal Name:	N-(2-cyano-3,12-dioxo-28-noroleana-1,9(11)-dien-17-yl)-2,2-difluoro-propanamide
Synonym:	Omaveloxolone
MF:	$C_{33}H_{44}F_2N_2O_3$
FW:	554.7
Purity:	≥98%
UV/Vis.:	λ_{max}: 239 nm
Supplied as:	A crystalline solid
Storage:	-20°C
Stability:	≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

RTA 408 is supplied as a crystalline solid. A stock solution may be made by dissolving the RTA 408 in the solvent of choice, which should be purged with an inert gas. RTA 408 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of RTA 408 in these solvents is approximately 2 mg/ml.

RTA 408 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, RTA 408 should first be dissolved in ethanol and then diluted with the aqueous buffer of choice. RTA 408 has a solubility of approximately 0.25 mg/ml in a 1:2 solution of ethanol:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

RTA 408 is a synthetic triterpenoid that binds Keap1 and attenuates the degradation of Nrf2 at concentrations ≤25 nM.[1] In this way, it suppresses the generation of nitric oxide and pro-inflammatory cytokines in macrophages stimulated with IFN-γ.[1] At higher concentrations, RTA 408 inhibits tumor cell growth (GI_{50} = 260 nM), blocks NF-κB signaling, and decreases levels of cyclin D1.[1] Topical application of RTA 408 activates Nrf2 and provides cytoprotective effects.[2,3]

References

1. Probst, B.L., Trevino, I., McCauley, L., *et al.* RTA 408, a novel synthetic triterpenoid with broad anticancer and anti-inflammatory activity. *PLoS One* **10(4)**, 1-16 (2015).
2. Reisman, S.A., Lee, C.Y., Meyer, C.J., *et al.* Topical application of the synthetic triterpenoid RTA 408 activates Nrf2 and induces cytoprotective genes in rat skin. *Arch. Dermatol. Res.* **306(5)**, 447-454 (2014).
3. Reisman, S.A., Lee, C.-Y.I., Meyer, C.J., *et al.* Topical application of the synthetic triterpenoid RTA 408 protects mice from radiation-induced dermatitis. *Radiat. Res.* **181(5)**, 512-520 (2014).

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