

Product Data Sheet

Product Name: RP-182 acetate

Cat. No.: GC79807

Chemical Properties

Cas. No.

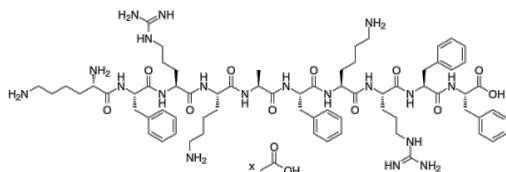
Formula $C_{69}H_{103}N_{19}O_{11} \cdot xC_2H_4O_2$ M.Wt 1374.68

Solubility $H_2O: \geq 100 \text{ mg/mL}$ Storage Sealed storage, away from moisture

General tips For obtaining a higher solubility, please warm the tube at 37 °C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Condition Evaluation sample solution: ship with blue ice All other available size: ship with RT, or blue ice upon request.

Structure



Background

RP-182 acetate is a synthetic immunomodulatory peptide that exerts anti-tumor effects by targeting

Caution: Product has not been fully validated for medical applications. For research use only.

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the mannose receptor CD206 ($K_d = 8 \mu\text{M}$) on the surface of tumor-associated macrophages (TAMs). RP-182 acetate induces a conformational switch of the CD206 receptor, which activates NF- κ B signaling and phagocytosis in CD206 high TAMs. RP-182 acetate has dual function: activation of canonical NF- κ B signaling, triggering TNF α secretion and autocrine activation of the TNF receptor 1 (TNFR1), leading to activation of caspase 8, apoptosis, and cell death. RP-182 acetate is used in pancreatic cancer and melanoma research [1] [2].

In Vivo, RP-182 acetate (20 mg/kg, i.p., every other day for 2 weeks) significantly inhibits tumor growth B16 melanoma and KP16 pancreatic model and improves mice immunogenicity[1][2]. RP-182 acetate (20 mg/kg, i.p., once daily for 18 days) significantly alleviates pulmonary fibrosis in mice[2].

In Vitro, RP-182 acetate (1 nM-1 mM, 48 h) increases cell killing of CD206high M2-like macrophages with an IC_{50} of 17.6 μM through the MyD88/NF- κ B pathway[1][2]. RP-182 acetate (0.1 μM , 2-24 h) internalizes CD206, activated NF- κ B, and increased IRF7 phosphorylation in IL-4-polarized M2 bone marrow-derived macrophages[1][2]. RP-182 acetate (3-30 μM , 24 h) increases levels of inflammatory factors secreted by macrophages, indicating immune reprogramming[1][2].

References:

- [1]. Singh SS, et al. Fatty Acid Derivatization and Cyclization of the Immunomodulatory Peptide RP-182 Targeting CD206high Macrophages Improve Antitumor Activity. Mol Cancer Ther. 2024 Dec 3;23(12):1827-1841.
- [2]. Jaynes JM, et al. Mannose receptor (CD206) activation in tumor-associated macrophages enhances adaptive and innate antitumor immune responses. Sci Transl Med. 2020 Feb 12;12(530):eaax6337.

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