

RP-182

Chemical Properties

CAS No. : 1895883-60-9

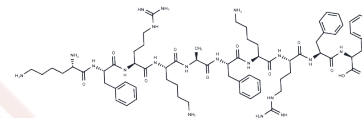
Formula: C69H103N19O11

Molecular Weight: 1374.68

Keep away from moisture

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year

Actual storage temperature shall be subject to the COA.



Biological Description

Description	RP-182 is a synthetic immunomodulatory peptide that exerts antitumor effects by targeting the mannose receptor CD206 on the surface of tumor-associated macrophages (TAM) with a binding affinity (Kd) of 8 μ M. It induces a conformational change in the CD206 receptor, which activates NF- κ B signaling and phagocytosis in TAM with high CD206 expression. RP-182 serves a dual function by activating the canonical NF- κ B signaling pathway, leading to TNF α secretion and autocrine activation of TNF receptor 1 (TNFR1), which subsequently results in caspase 8 activation and apoptosis. This compound is studied in the contexts of pancreatic cancer and melanoma.
Targets(IC50)	Apoptosis,NF- κ B,Caspase,TNF
In vitro	RP-182 is a compound that enhances its cytotoxic effect against CD206 high M2-like macrophages through the MyD88/NF- κ B pathway, with an IC50 of 17.6 μ M, when used in concentrations ranging from 1 nM to 1 mM over 48 hours. Additionally, at a concentration of 0.1 μ M for 2 to 24 hours, RP-182 internalizes CD206, activates NF- κ B, and increases IRF7 phosphorylation in M2 bone marrow-derived macrophages polarized with IL-4. Furthermore, RP-182 at concentrations of 3-30 μ M for 24 hours raises the levels of inflammatory factors secreted by macrophages, indicating an immune reprogramming effect.
In vivo	Administered intraperitoneally at 20 mg/kg every other day for 2 weeks, RP-182 significantly inhibits tumor growth in B16 melanoma and KP16 pancreatic models while enhancing immunogenicity in mice. Moreover, a daily intraperitoneal injection of RP-182 at 20 mg/kg over 18 days markedly alleviates pulmonary fibrosis in mice.

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	0.7274 mL	3.6372 mL	7.2744 mL
5 mM	0.1455 mL	0.7274 mL	1.4549 mL
10 mM	0.0727 mL	0.3637 mL	0.7274 mL
50 mM	0.0145 mL	0.0727 mL	0.1455 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

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