

Lucinactant

Chemical Properties

CAS No. :	825600-90-6
Formula:	C128H242N26O24
Molecular Weight:	2529.45
Storage:	Keep away from moisture Powder: -20°C for 3 years In solvent: -80°C for 1 year <small>Actual storage temperature shall be subject to the COA.</small>

Biological Description

Description	Lucinactant, a novel synthetic peptide, functionally mimics the anti-inflammatory properties of surfactant protein B. As a KL4-Surfactant, it protects human airway epithelium from hyperoxia [1] [2] [3].
In vitro	Lucinactant (140 µL; 24 h and 72 h) offers anti-inflammatory benefits by outperforming both an animal-derived surfactant and saline control throughout 72 hours of moderate hyperoxia [1]. In addition, at the same dosage and a 24-hour exposure, it significantly lowers IL-8 and IL-6 secretion in hyperoxically exposed Calu-3 monolayers compared to normal saline [1]. Furthermore, Lucinactant mitigates the presence of swollen nuclei and intracellular vacuoles in Calu-3 cells during similar hyperoxic conditions [1]. In a Cell Viability Assay, hyperoxically exposed Calu-3 monolayers treated with Lucinactant for 72 hours displayed improved cell viability and transepithelial resistance [1].
In vivo	Lucinactant (175 mg total phospholipid/5.8 mL/kg; intratracheal medication; single dose) reduces pulmonary inflammation, maintains lung structure, and enhances physiological outcomes in preterm lambs (125-128 days gestation) with respiratory distress syndrome (RDS) [2]. The administration of 175 mg total phospholipid/kg (5.8 mL/kg) resulted in diminished lung and systemic inflammatory responses, improved oxygenation with lower ventilatory demands, and better-preserved lung structural integrity.

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	0.3953 mL	1.9767 mL	3.9534 mL
5 mM	0.0791 mL	0.3953 mL	0.7907 mL
10 mM	0.0395 mL	0.1977 mL	0.3953 mL
50 mM	0.0079 mL	0.0395 mL	0.0791 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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