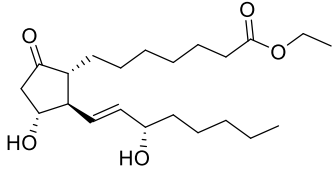


Product data sheet



MedKoo Cat#: 573745 Name: Alprostadil ethyl ester CAS#: 35900-16-4 Chemical Formula: C ₂₂ H ₃₈ O ₅ Exact Mass: 382.2719 Molecular Weight: 382.54	
Product supplied as:	Powder
Purity (by HPLC):	≥ 98%
Shipping conditions	Ambient temperature
Storage conditions:	Powder: -20°C 3 years; 4°C 2 years. In solvent: -80°C 3 months; -20°C 2 weeks.

1. Product description:

Alprostadil ethyl ester is a biochemical used in the treatment of scleroderma.

2. CoA, QC data, SDS, and handling instruction

SDS and handling instruction, CoA with copies of QC data (NMR, HPLC and MS analytical spectra) can be downloaded from the product web page under “QC And Documents” section. Note: copies of analytical spectra may not be available if the product is being supplied by MedKoo partners. Whether the product was made by MedKoo or provided by its partners, the quality is 100% guaranteed.

3. Solubility data

Solvent	Max Conc. mg/mL	Max Conc. mM
DMSO	50.0	130.71
DMF	50.0	130.71
Ethanol	30.0	78.42
PBS (pH 7.2)	0.25	0.65

4. Stock solution preparation table:

Concentration / Solvent Volume / Mass	1 mg	5 mg	10 mg
1 mM	2.61 mL	13.07 mL	26.14 mL
5 mM	0.52 mL	2.61 mL	5.23 mL
10 mM	0.26 mL	1.31 mL	2.61 mL
50 mM	0.05 mL	0.26 mL	0.52 mL

5. Molarity Calculator, Reconstitution Calculator, Dilution Calculator

Please refer the product web page under section of “Calculator”

6. Recommended literature which reported protocols for in vitro and in vivo study

In vitro study

1. Yu T, Dong D, Guan J, Sun J, Guo M, Wang Q. Alprostadil attenuates LPS-induced cardiomyocyte injury by inhibiting the Wnt5a/JNK/NF-κB pathway. *Herz*. 2020 Dec;45(Suppl 1):130-138. doi: 10.1007/s00059-019-4837-0. Epub 2019 Jul 16. PMID: 31312872; PMCID: PMC7721679.
2. Haider DG, Bucek RA, Giurgea AG, Maurer G, Glogar H, Minar E, Wolzt M, Mehrabi MR, Baghestanian M. PGE1 analog alprostadil induces VEGF and eNOS expression in endothelial cells. *Am J Physiol Heart Circ Physiol*. 2005 Nov;289(5):H2066-72. doi: 10.1152/ajpheart.00147.2005. Epub 2005 Jun 10. PMID: 15951350.

In vivo study

1. Wang M, Cai XF, Zhang SM, Xia SY, Du WH, Ma YL. Alprostadil alleviates liver injury in septic rats via TLR4/NF-κB pathway. *Eur Rev Med Pharmacol Sci*. 2021 Feb;25(3):1592-1599. doi: 10.26355/eurrev_202102_24869. PMID: 33629328.
2. Qin Z, Kong B, Zheng J, Wang X, Li L. Alprostadil Injection Attenuates Coronary Microembolization-Induced Myocardial Injury Through GSK-3β/Nrf2/HO-1 Signaling-Mediated Apoptosis Inhibition. *Drug Des Devel Ther*. 2020 Oct 22;14:4407-4422. doi: 10.2147/DDDT.S272877. PMID: 33122886; PMCID: PMC7588838.

7. Bioactivity

Product data sheet



Biological target:

An esterified form of PGE1.

In vitro activity

Cells were pretreated with different doses of alprostadiol and then treated with 100 µg/l LPS for 3 h, 6 h, 12 h, and 24 h. This study found that cell viability was significantly restored by the pretreatment with alprostadiol (Fig. 1). The cell viability gradually recovered in cells pretreated with 45 µg/l alprostadiol for 12 and 24 h ($p < 0.01$; Fig. 2b). These results indicate that alprostadiol protected H9c2 cells against LPS-induced injury; 45 µg/l alprostadiol was chosen and used in the following experiments.

Reference: Herz. 2020; 45(Suppl 1): 130–138. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7721679/>

In vivo activity

Apoptosis assay was performed to explore the effect of Alp (Alprostadiol) on liver cell apoptosis. It was found that the proportion of apoptotic liver cells in CLP group was considerably higher than that in Sham group and Alp group ($p < 0.05$). Compared with CLP group, the proportion of apoptotic liver cells remarkably declined in Alp group ($p < 0.05$) (Figure 2). These results suggest that Alp represses the apoptosis in rats with liver injury and promotes the recovery of liver function.

Reference: Eur Rev Med Pharmacol Sci. 2021 Feb;25(3):1592-1599. <https://pubmed.ncbi.nlm.nih.gov/33629328/>

Note: The information listed here was extracted from literature. MedKoo has not independently retested and confirmed the accuracy of these methods. Customer should use it just for a reference only.