Treprostinil (diethanolamine salt)

Item No. 11927

CAS Registry No.: 830354-48-8
Formal Name: 2-[[[(1R,2R,3aS,9aS)-2,3,3a,4,9,9a-hexahydroxy-1-[(3S)-3-hydroxyoctyl]-1H-benz[f]inden-5-yl]oxy]-acetic acid, diethanolamine salt

Synonym: UT 15C
MF: C23H33O5 • C6H12NO2
FW: 495.7
Purity: ≥98%
Stability: ≥2 years at -20°C
Supplied as: A crystalline solid

Laboratory Procedures

For long term storage, we suggest that treprostinil (diethanolamine salt) be stored as supplied at -20°C. It should be stable for at least two years.

Treprostinil (diethanolamine salt) is supplied as a crystalline solid. A stock solution may be made by dissolving the treprostinil (diethanolamine salt) in the solvent of choice. Treprostinil (diethanolamine salt) is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide, which should be purged with an inert gas. The solubility of treprostinil (diethanolamine salt) in these solvents is approximately 13, 5, and 20 mg/ml, respectively.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of treprostinil (diethanolamine salt) can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of treprostinil (diethanolamine salt) in PBS, pH 7.2, is approximately 5 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Primary pulmonary hypertension is a condition of unknown cause that is characterized by increasing pulmonary arterial and vascular resistance. Treprostinil is a stable analog of prostacyclin that is used clinically for the treatment of PPH under the trade name Remodulin®. The structural modifications in treprostinil compared to prostacyclin increase the plasma half-life from 2 minutes to 34 and 85 minutes for intravenous and subcutaneous infusion of the drug, respectively. In addition to treprostinil’s direct vasodilatory effects, it also inhibits inflammatory cytokine (TNF-α, IL-1β, IL-6, and GM-CSF) production by human alveolar macrophages in the sub-micromolar range by preventing NF-κB translocation to the nucleus. The diethanolamine salt of treprostinil is soluble in aqueous media.

References


Related Products

For a list of related products please visit: www.caymanchem.com/catalog/11927

WARNING: This product is for laboratory research only: not for administration to humans. Not for human or veterinary diagnostic or therapeutic use.

MATERIAL SAFETY DATA

This material should be considered hazardous until information to the contrary becomes available. Do not ingest, swallow, or inhale. Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling. This information contains some, but not all, of the information required for the safe and proper use of this material. Before use, the user must review the complete Material Safety Data Sheet, which has been sent via email to your institution.

WARRANTY AND LIMITATION OF REMEDY

Cayman Chemical Company makes no warranty or guarantee of any kind, whether written or oral, expressed or implied, including without limitation, any warranty of fitness for a particular purpose, suitability and merchantability, which extends beyond the description of the chemicals herein. Cayman warrants only to the original customer that the material will meet our specifications. Cayman will carry out its delivery obligations with due care and skill. Thus, in no event will Cayman have any obligation or liability, whether in tort (including negligence) or in contract, for any direct, indirect, incidental or consequential damages, even if Cayman is informed about their possible existence.

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Buyer’s exclusive remedy and Cayman’s sole liability hereunder shall be limited to a refund of the purchase price, or at Cayman’s option, the replacement, at no cost to Buyer, of all material that does not meet our specifications.

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