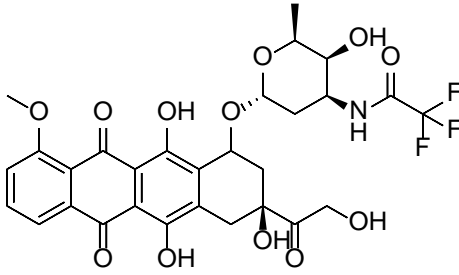


Product data sheet



MedKoo Cat#: 597592 Name: N-Trifluoroacetyladiamycin CAS: 26295-56-7 Chemical Formula: C ₂₉ H ₂₈ F ₃ NO ₁₂ Exact Mass: 639.1564 Molecular Weight: 639.5332		
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:

N-Trifluoroacetyladiamycin is a metabolite of valrubicin. Valrubicin (N-trifluoroacetyladiamycin-14-valerate, trade name Valstar) is a chemotherapy drug used to treat bladder cancer. Valrubicin is a semisynthetic analog of the anthracycline doxorubicin, and is administered by infusion directly into the bladder. It was originally launched as Valstar in the U.S.

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
TBD	TBD	TBD

4. Stock solution preparation table:

Concentration / Solvent Volume / Mass	1 mg	5 mg	10 mg
1 mM	1.56 mL	7.82 mL	15.64 mL
5 mM	0.31 mL	1.56 mL	3.13 mL
10 mM	0.16 mL	0.78 mL	1.56 mL
50 mM	0.03 mL	0.16 mL	0.31 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. Laugesen IG, Hauge E, Andersen SM, Stenderup K, de Darkó E, Dam TN, Rosada C. Valrubicin activates PKCα in keratinocytes: a conceivable mode of action in treating hyper-proliferative skin diseases. *J Drugs Dermatol.* 2013 Oct;12(10):1156-62. PMID: 24085052.

In vivo study

1. Rosada C, Stenderup K, de Darkó E, Dagnaes-Hansen F, Kamp S, Dam TN. Valrubicin in a topical formulation treats psoriasis in a xenograft transplantation model. *J Invest Dermatol.* 2010 Feb;130(2):455-63. doi: 10.1038/jid.2009.277. Epub 2009 Sep 10. PMID: 19741712.

7. Bioactivity

Biological target:

N-Trifluoroacetyladiamycin is a metabolite of valrubicin.

In vitro activity

Valrubicin's mode of action in keratinocytes was investigated by studying its possible effect on PKCα activation. PKCα's characteristic to translocate from the cytoplasm to the cellular membrane when activated was assessed by measuring the amount of

Product data sheet



PKC α in the soluble and membrane-bound protein fractions isolated from valrubicin stimulated keratinocytes and by visualizing PKC α in stimulated cells over time. Downstream signaling was investigated by measuring the amount of phosphorylated Myristoylated Alanine-rich C-kinase substrate (MARCKS) and extracellular signal-regulated kinases (ERK) 1/2 of valrubicin-stimulated keratinocytes. The results indicated that valrubicin activates PKC α in vitro as shown by PKC α 's translocation and phosphorylation of downstream signaling molecules.

Reference: J Drugs Dermatol. 2013 Oct;12(10):1156-62. <https://jddonline.com/articles/dermatology/S1545961613P1156X>

In vivo activity

The effect of treating psoriasis with a daily topical application of valrubicin cream was investigated in a psoriasis xenograft transplantation model. In vivo, valrubicin treatment resulted in a normalization of epidermal morphology and a reduction in epidermal thickness after 12 days. In addition, the dermal vessel pattern was reduced and the stratum granulosum was regained. Staining for a regenerative proliferation marker showed a decrease in keratinocyte proliferation, and scattered epidermal cells showed apoptosis. These results indicated that valrubicin successfully treats psoriasis in a xenograft transplantation model, suggesting that topical valrubicin may become an upcoming treatment for psoriasis.

Reference: J Invest Dermatol. 2010 Feb;130(2):455-63. [https://www.jidonline.org/article/S0022-202X\(15\)34692-3/fulltext](https://www.jidonline.org/article/S0022-202X(15)34692-3/fulltext)

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.