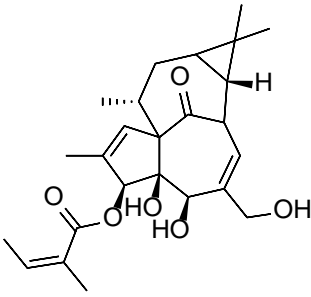


Product data sheet



MedKoo Cat#: 201545 Name: Ingenol Mebutate CAS#: 75567-37-2 Chemical Formula: C ₂₅ H ₃₄ O ₆ Exact Mass: 430.2355 Molecular Weight: 430.53		
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:

Ingenol mebutate, also known as ingenol-3-angelate, is a substance found in the sap of the plant *Euphorbia peplus* and an inducer of cell death. Ingenol Mebutate was approved for the topical treatment of actinic keratosis. Ingenol mebutate has also been found to be useful for reactivating latent HIV virus in cells taken from individuals who have tested negative for signs of the disease following extended courses of anti-retroviral drugs, raising the possibility that this drug may be used to expose the last traces of virus, and thus potentially provide a permanent cure for HIV infection.

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	100.0	232.27

4. Stock solution preparation table:

Concentration / Solvent Volume / Mass	1 mg	5 mg	10 mg
1 mM	2.32 mL	11.61 mL	23.23 mL
5 mM	0.46 mL	2.32 mL	4.65 mL
10 mM	0.23 mL	1.16 mL	2.32 mL
50 mM	0.05 mL	0.23 mL	0.46 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. Braun SA, Baran J, Schrupf H, Buhren BA, Bölke E, Homey B, Gerber PA. Ingenol mebutate induces a tumor cell-directed inflammatory response and antimicrobial peptides thereby promoting rapid tumor destruction and wound healing. *Eur J Med Res.* 2018 Sep 28;23(1):45. doi: 10.1186/s40001-018-0343-8. PMID: 30266096; PMCID: PMC6161468.

In vivo study

1. Erlendsson AM. Exploring the use of ingenol mebutate to prevent non-melanoma skin cancer. *Dan Med J.* 2017 Nov;64(11):B5368. PMID: 29115209.

7. Bioactivity

Biological target: Ingenol Mebutate acts as a PKC modulator with Kis of 0.3, 0.105, 0.162, 0.376, and 0.171 nM for PKC- α , PKC- β , PKC- γ , PKC- δ , and PKC- ϵ , respectively.

In vitro activity

Product data sheet



Ingenol mebutat (IM) significantly and dose-dependently induced the expression of proinflammatory chemokines (CXCL8, CCL2) and AMP (RNase7, HBD3) in human epithelial keratinocytes (HEK) and epithelial cancer cell lines. A significantly stronger induction of CXCL8 and CCL2 was observed in tested tumor cells as compared to HEK. No significant effect was observed of IM on HEK migration, respectively wound healing responses in vitro for any tested concentration (10-9, 10-8, 10-6 M) except 10-7 M, which induced a significant inhibition.

Reference: Eur J Med Res. 2018 Sep 28;23(1):45. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6161468/>

In vivo activity

In two in vivo murine studies, ingenol mebutate's effect on photodamage and squamous cell carcinoma formation was investigated. Mice were irradiated with solar simulated ultraviolet radiation. During the first 20 weeks, 5 single applications with ingenol mebutate were given at four-week intervals. Prophylactic treatments with ingenol mebutate prevented progression of histological photodamage of all investigated characteristics, including keratosis grade, epidermal hypertrophy, dysplasia, and dermal actinic damage. In addition, tumor formation was postponed by 3 weeks.

Reference: Dan Med J. 2017 Nov;64(11):B5368. <https://ugeskriftet.dk/dmj/exploring-use-ingenol-mebutate-prevent>

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.