# Product data sheet

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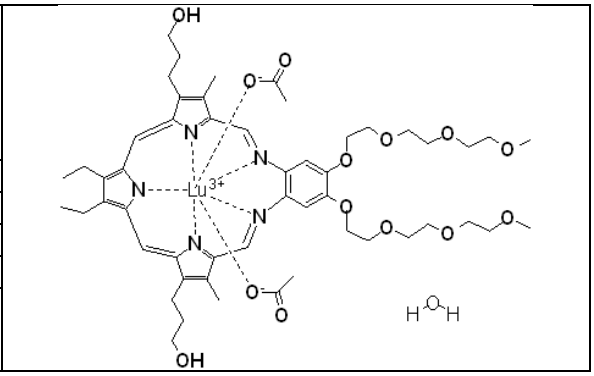
|---|---|
| MedKoo Cat#: 201942<br>Name: Motexafin lutetium hydrate<br>CAS#: 156436-90-7<br>Chemical Formula: $C_{52}H_{74}LuN_5O_{15}$<br>Molecular Weight: 1166.12 |  |
| Product supplied as: | Powder |
| Purity (by HPLC): | ≥ 98% |
| Shipping conditions | Ambient temperature |
| Storage conditions: | Powder: -20°C 3 years; 4°C 2 years. |
| | In solvent: -80°C 3 months; -20°C 2 weeks. |

**1. Product description:**

Motexafin lutetium is a texaphyrin, marketed as Antrin by Pharmacyclics Inc. Motexafin lutetium is structurally a pentadentate aromatic metallotexaphyrin with photosensitizing properties. Motexafin lutetium preferentially accumulates in tumor cells due to their increased rates of metabolism and absorbs light, forming an extended high energy conformational state that produces high quantum yields of singlet oxygen, resulting in local cytotoxic effects. M otexafin lutetium is a photosensitiser for use in photodynamic therapy to treat skin conditions and superficial cancers. It has also been tested for use in photoangioplasty (photodynamic treatment of diseased arteries). It is photoactivated by 732 nm light which allows greater depth of penetration.

**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 | TBD | TBD |

**4. Stock solution preparation table:**

| Concentration / Solvent Volume / Mass | 1 mg | 5 mg | 10 mg |
|---|---|---|---|
| 1 mM | 0.86 mL | 4.29 mL | 8.58 mL |
| 5 mM | 0.17 mL | 0.86 mL | 1.72 mL |
| 10 mM | 0.09 mL | 0.43 mL | 0.86 mL |
| 50 mM | 0.02 mL | 0.09 mL | 0.17 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

TBD

In vivo study

1. Hsi RA, Kapatkin A, Strandberg J, Zhu T, Vulcan T, Solonenko M, Rodriguez C, Chang J, Saunders M, Mason N, Hahn S. Photodynamic therapy in the canine prostate using motexafin lutetium. Clin Cancer Res. 2001 Mar;7(3):651-60. PMID: 11297261.
2. Griffin GM, Zhu T, Solonenko M, Del Piero F, Kapakin A, Busch TM, Yodh A, Polin G, Bauer T, Fraker D, Hahn SM. Preclinical evaluation of motexafin lutetium-mediated intraperitoneal photodynamic therapy in a canine model. Clin Cancer Res. 2001 Feb;7(2):374-81. PMID: 11234893.

**7. Bioactivity**

Biological target:

Motexafin lutetium is a pentadentate aromatic metallotexaphyrin with photosensitizing properties.

# Product data sheet

In vitro activity

TBD

In vivo activity

Our purpose was to determine the feasibility of comprehensive treatment of the canine prostate with photodynamic therapy (PDT) using motexafin lutetium (Lu-Tex) and to evaluate the toxicity and tissue effects associated with this treatment. Twenty-five adult male beagles with normal prostate glands were given an i.v. injection of the second-generation photosensitizer Lu-Tex (2–6 mg/kg). An apparent allergic reaction to the photosensitizer injection was noted in 10 of 14 dogs receiving 6 mg/kg Lu-Tex. Based on these initial results, the light fluence was escalated to 150 J/cm at a fluence rate of 150 mW/cm and the Lu-Tex dose remained at 6 mg/kg. The next experiments were designed to evaluate the acute (2 days after PDT) clinical and histological effects from this increased light fluence. Based on these results, the doses of Lu-Tex and light were decreased. A total of 11 dogs were treated with Lu-Tex 2 mg/kg, with a light fluence of 100 J/cm at a fluence rate of 150 mW/cm. No acute or long-term clinical toxicities were observed. The results of this study demonstrated that Lu-Tex PDT is feasible in the canine prostate.

Reference: Clin Cancer Res. 2001 Mar;7(3):651-60. https://pubmed.ncbi.nlm.nih.gov/11297261/