

Product data sheet



MedKoo Cat#: 556351 Name: PSMA-I&T CAS#: 2192281-54-0 Chemical Formula: C ₆₃ H ₉₂ IN ₁₁ O ₂₃ Exact Mass: 1497.5412 Molecular Weight: 1498.39		
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:

PSMA-I&T is a PSMA-based radioligand. [177Lu]Lu-PSMA I&T can be used for potential treatment of metastatic castration-resistant prostate cancer. 67 Ga-PSMA I&T can be used for radioguided surgery of lymph node metastases with biochemical recurrence of prostate cancer.

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
To be determined	To be determined	To be determined

4. Stock solution preparation table:

Concentration / Solvent Volume / Mass	1 mg	5 mg	10 mg
1 mM	0.67 mL	3.34 mL	6.67 mL
5 mM	0.13 mL	0.67 mL	1.33 mL
10 mM	0.07 mL	0.33 mL	0.67 mL
50 mM	0.01 mL	0.07 mL	0.13 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

To be determined

In vivo study

- Privé BM, Derks YHW, Rosar F, Franssen GM, Peters SMB, Khreish F, Bartholomä M, Maus S, Gotthardt M, Laverman P, Konijnenberg MW, Ezziddin S, Nagarajah J, Heskamp S. 89Zr-labeled PSMA ligands for pharmacokinetic PET imaging and dosimetry of PSMA-617 and PSMA-I&T: a preclinical evaluation and first in man. *Eur J Nucl Med Mol Imaging*. 2022 May;49(6):2064-2076. doi: 10.1007/s00259-021-05661-0. Epub 2021 Dec 21. PMID: 34932154.
- Chatalic KL, Heskamp S, Konijnenberg M, Molkenboer-Kuenen JD, Franssen GM, Clahsen-van Groningen MC, Schottelius M, Wester HJ, van Weerden WM, Boerman OC, de Jong M. Towards Personalized Treatment of Prostate Cancer: PSMA I&T, a Promising Prostate-Specific Membrane Antigen-Targeted Theranostic Agent. *Theranostics*. 2016 Apr 12;6(6):849-61. doi: 10.7150/thno.14744. PMID: 27162555; PMCID: PMC4860893.

7. Bioactivity

Biological target:

PSMA I&T is a potent PSMA (prostate-specific membrane antigen) inhibitor.

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In vitro activity

To be determined

In vivo activity

PSMA I&T has potential as a theranostic tool for prostate cancer (PCa), with blocking agents like 2-PMPA mitigating kidney uptake concerns. PSMA I&T effectively localized in PSMA-expressing tumors but also accumulated in kidneys and salivary glands. However, coadministration of 2-PMPA reduced renal uptake, improving tumor visualization and reducing kidney toxicity during radionuclide therapy.

Reference: Theranostics. 2016 Apr 12;6(6):849-61. <https://pubmed.ncbi.nlm.nih.gov/27162555/>

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.