

Product data sheet



MedKoo Cat#: 328713 Name: Iopanoic Acid CAS: 96-83-3 Chemical Formula: C ₁₁ H ₁₂ I ₃ NO ₂ Exact Mass: 570.8002 Molecular Weight: 570.9354		
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:

Iopanoic Acid, also known as Telepaque, is an iodine containing oral cholecystographic agent that has been used to treat hyperthyroidism. Iopanoic acid is also a radiopaque medium used as diagnostic aid.

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	175.15

4. Stock solution preparation table:

Concentration / Solvent Volume / Mass	1 mg	5 mg	10 mg
1 mM	1.75 mL	8.76 mL	17.52 mL
5 mM	0.35 mL	1.75 mL	3.50 mL
10 mM	0.18 mL	0.88 mL	1.75 mL
50 mM	0.04 mL	0.18 mL	0.35 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. Aoki T, Tsunekawa K, Araki O, Ogiwara T, Nara M, Sumino H, Kimura T, Murakami M. Type 2 Iodothyronine Deiodinase Activity Is Required for Rapid Stimulation of PI3K by Thyroxine in Human Umbilical Vein Endothelial Cells. *Endocrinology*. 2015 Nov;156(11):4312-24. doi: 10.1210/en.2014-1988. Epub 2015 Aug 18. PMID: 26284425; PMCID: PMC4606755.

In vivo study

1. Farías-Serratos BM, Lazcano I, Villalobos P, Darras VM, Orozco A. Thyroid hormone deficiency during zebrafish development impairs central nervous system myelination. *PLoS One*. 2021 Aug 17;16(8):e0256207. doi: 10.1371/journal.pone.0256207. PMID: 34403440; PMCID: PMC8370640.

2. Kojima Y, Kondo Y, Fujishita T, Mishiro-Sato E, Kajino-Sakamoto R, Taketo MM, Aoki M. Stromal iodothyronine deiodinase 2 (DIO2) promotes the growth of intestinal tumors in ApcΔ716 mutant mice. *Cancer Sci*. 2019 Aug;110(8):2520-2528. doi: 10.1111/cas.14100. Epub 2019 Jul 7. PMID: 31215118; PMCID: PMC6676103.

7. Bioactivity

Biological target:

Iopanoic acid is an inhibitor of 5'-Deiodinase and also an iodinated contrast medium.

In vitro activity

Product data sheet



IOP (iopanoic acid) blocked Akt phosphorylation, Rac activation, and cell migration induced by T₄, but not by T₃ or S1P (Figure 3, A–C, and Figure 4A). S1P stimulated phosphorylation of Akt, Erk, and Src with or without IOP (Figure 3A), indicating the viability of HUVECs after treatment with IOP. These results suggest that deiodination of T₄ is a key step in T₄-induced Akt phosphorylation, Rac activation, and cell migration of HUVECs.

Reference: Endocrinology. 2015 Nov;156(11):4312-24. <https://pubmed.ncbi.nlm.nih.gov/26284425/>

In vivo activity

IOP (iopanoic acid) treatment reduced the amount of NG2 stain in 3 dpf larvae, as compared to controls, while 7 dpf controls and IOP-treated larvae were no longer significantly different. To further analyze a possible myelination delay *in vivo*, myelin fluorescent signal was followed in living larvae at the onset of myelination (2.5 dpf) and once myelin formation is ongoing (3 dpf) using *mbp:egfp* transgenic larvae with or without IOP treatment.

Reference: PLoS One. 2021 Aug 17;16(8):e0256207. <https://pubmed.ncbi.nlm.nih.gov/34403440/>

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.