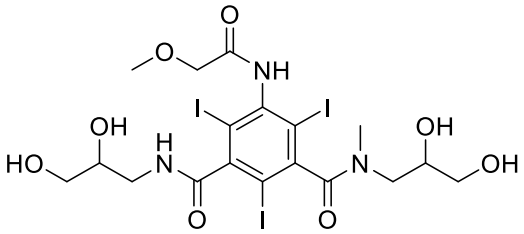
Product data sheet

MedKoo Cat#: 525289 Name: Iopromide CAS: 73334-07-3 Chemical Formula: $C_{18}H_{24}I_3N_3O_8$ Exact Mass: 790.8697 Molecular Weight: 791.1164	
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:
Iopromide is a low osmolar, non-ionic contrast agent for intravascular use. Iopromide is a molecule used as a contrast medium.

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
DMF	3.0	3.79
DMSO	100.0	126.40
PBS (pH 7.2)	3.0	3.79
Water	100.0	126.40

4. Stock solution preparation table:

Concentration / Solvent Volume / Mass	1 mg	5 mg	10 mg
1 mM	1.26 mL	6.32 mL	12.64 mL
5 mM	0.25 mL	1.26 mL	2.53 mL
10 mM	0.13 mL	0.63 mL	1.26 mL
50 mM	0.03 mL	0.13 mL	0.25 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. Pei MX, Dong SJ, Gao XY, Luo T, Fan D, Jin JF, Zhao XD, Chen YL. Salvianolic Acid B Attenuates Iopromide-Induced Renal Tubular Epithelial Cell Injury by Inhibiting the TLR4/NF-κB/NLRP3 Signaling Pathway. Evid Based Complement Alternat Med. 2022 Jun 26;2022:8400496. doi: 10.1155/2022/8400496. PMID: 35795279; PMCID: PMC9251145.
2. Tsai YF, Yang JS, Tsai FJ, Cheng YD, Chiu YJ, Tsai SC. High Concentration of Iopromide Induces Apoptosis and Autophagy in Human Embryonic Kidney Cells via Activating a ROS-dependent Cellular Stress Pathway. In Vivo. 2021 Nov-Dec;35(6):3221-3232. doi: 10.21873/invivo.12617. PMID: 34697153; PMCID: PMC8627727.

In vivo study

1. Tsai YF, Yang JS, Tsai FJ, Cheng YD, Chiu YJ, Tsai SC. High Concentration of Iopromide Induces Apoptosis and Autophagy in Human Embryonic Kidney Cells via Activating a ROS-dependent Cellular Stress Pathway. In Vivo. 2021 Nov-Dec;35(6):3221-3232. doi: 10.21873/invivo.12617. PMID: 34697153; PMCID: PMC8627727.

7. Bioactivity
Biological target:

Iopromide is a non-ionic, monomeric, iodine-based contrast medium for intravascular administration.

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In vitro activity

After adding Sal B (10, 50, and 100 μmol/L), the cell viability increased (Figure 1(b)), indicating that Sal B can mitigate HK-2 cell injury caused by iopromide. After treatment with iopromide, some of the nuclei showed high-density fluorescence and apoptotic characteristics, such as karyopyknosis and karyorrhexis. However, these apoptotic nuclei decreased after treatment with different concentrations of Sal B (Figures 1(c) and 1(d)). Iopromide significantly increased the levels of Bax/Bcl-2 and cleaved caspase-3.

Reference: Evid Based Complement Alternat Med. 2022 Jun 26;2022:8400496. https://pubmed.ncbi.nlm.nih.gov/35795279/

In vivo activity

CIN (contrast-induced nephropathy) was induced by the intravenous injection of iodinated contrast medium (CM) iopromide (1.8 g/kg) into Sprague Dawley rats with normal food intake or 40% reduced food intake, 4 weeks prior to iopromide administration. This study found that CR (calorie restriction) was protective of CIN, assessed by renal structure and function.

Reference: In Vivo. 2021 Nov-Dec;35(6):3221-3232. https://pubmed.ncbi.nlm.nih.gov/34712381/