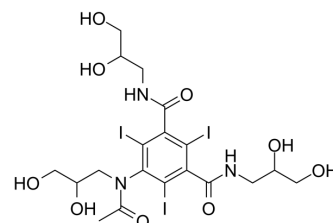


Iohexol

Cat. No.:	HY-B0594
CAS No.:	66108-95-0
Molecular Formula:	C ₁₉ H ₂₆ I ₃ N ₃ O ₉
Molecular Weight:	821.14
Target:	Autophagy; Mitophagy
Pathway:	Autophagy
Storage:	4°C, protect from light * In solvent : -80°C, 6 months; -20°C, 1 month (protect from light)



SOLVENT & SOLUBILITY

In Vitro

H₂O : ≥ 50 mg/mL (60.89 mM)
 DMSO : 50 mg/mL (60.89 mM; Need ultrasonic)
 * "≥" means soluble, but saturation unknown.

Preparing Stock Solutions	Solvent Concentration	Mass		
		1 mg	5 mg	10 mg
	1 mM	1.2178 mL	6.0891 mL	12.1782 mL
	5 mM	0.2436 mL	1.2178 mL	2.4356 mL
	10 mM	0.1218 mL	0.6089 mL	1.2178 mL

Please refer to the solubility information to select the appropriate solvent.

In Vivo

- Add each solvent one by one: PBS
Solubility: 120 mg/mL (146.14 mM); Clear solution; Need ultrasonic
- Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
Solubility: ≥ 2.5 mg/mL (3.04 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
Solubility: ≥ 2.5 mg/mL (3.04 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% corn oil
Solubility: ≥ 2.5 mg/mL (3.04 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Iohexol is a non-ionic, water-soluble contrast agent used as a reference marker for the determination of glomerular filtration rate (GFR) at the level of renal function. Iohexol can be used for contrast in myelography, computerized tomography (cisternography, ventriculography) and MicroCT imaging^{[1][2]}.

In Vitro

Iohexol (150 mg I/mL, 0-24 h) inhibits the cell viability of NRK 52-E^[3].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Cell Viability Assay^[3]

Cell Line:	NRK 52-E
Concentration:	150 mg l/mL
Incubation Time:	0-24 h
Result:	Reduced the MTT conversion at 12 and 24 h. Inhibited mitochondrial dehydrogenase activity at 12 and 24 h.

In Vivo

Iohexol (0.25-4 mL/kg, p.o., weekly) promotes the differentiation of dogs intestinal segments after application of 0.5-2.0 mL/kg^[4].

Iohexol (64.7 mg/kg, i.v.) can be used to evaluate glomerular filtration rate (GFR) in healthy or dogs with presenting chronic kidney disease (CKD)^[5].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	Healthy dogs ^[4]
Dosage:	0.25-4 mL/kg
Administration:	Oral gavage (p.o.), weekly
Result:	Peaked the iohexol serum concentrations between 2 and 4 hours. Reduced radiolucency after application of 0.25 mL/kg and 4 mL/kg. Included watery diarrhea after ingestion of 4 mL/kg.

CUSTOMER VALIDATION

- Sci Rep. 2019 Mar 14;9(1):4505.
- Sci Rep. 2018 Sep 14;8(1):13803.

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REFERENCES

- [1]. Soman RS, et al. Development and validation of an HPLC-UV method for determination of iohexol in human plasma. J Chromatogr B Analyt Technol Biomed Life Sci. 2005 Feb 25;816(1-2):339-43.
- [2]. Jensen H, et al. The effects of the iodinated X-ray contrast media iodixanol, iohexol, iopromide, and ioversol on the rat kidney epithelial cell line NRK 52-E. Ren Fail. 2011;33(4):426-33.
- [3]. Klenner S, et al. Estimation of intestinal permeability in healthy dogs using the contrast medium iohexol. Vet Clin Pathol. 2009 Sep;38(3):353-60.
- [4]. Baklouti S, et al. Population Pharmacokinetic Model of Iohexol in Dogs to Estimate Glomerular Filtration Rate and Optimize Sampling Time. Front Pharmacol. 2021 Apr 29;12:634404.
- [5]. Hainfeld JF, Ridwan SM, Stanishevskiy Y, Smilowitz NR, Davis J, Smilowitz HM. Small, Long Blood Half-Life Iodine Nanoparticle for Vascular and Tumor Imaging. Sci Rep. 2018 Sep 14;8(1):13803.

Caution: Product has not been fully validated for medical applications. For research use only.

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