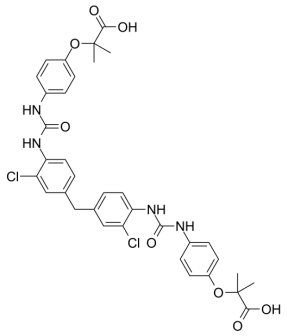
LR-90

Cat. No.:	HY-76383		
CAS No.:	245075-84-7		
Molecular Formula:	$C_{35}H_{34}Cl_2N_4O_8$		
Molecular Weight:	709.57		
Target:	Others		
Pathway:	Others		
Storage:	Powder	-20°C	3 years
		4°C	2 years
	In solvent	-80°C	2 years
		-20°C	1 year



SOLVENT & SOLUBILITY

In Vitro

DMSO : ≥ 100 mg/mL (140.93 mM)

* "≥" means soluble, but saturation unknown.

Preparing Stock Solutions	Concentration / Solvent / Mass	1 mg	5 mg	10 mg
	1 mM	1.4093 mL	7.0465 mL	14.0930 mL
	5 mM	0.2819 mL	1.4093 mL	2.8186 mL
	10 mM	0.1409 mL	0.7047 mL	1.4093 mL

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

In Vivo

1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: ≥ 2.5 mg/mL (3.52 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (3.52 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

LR-90 is an advanced glycation end product (AGE) inhibitor, inhibits inflammatory responses in human monocytes[1]. LR-90 is also used in the research of diabetic animal model[2].

IC_{50} & Target

AGE[1]

In Vitro

LR-90 (0, 25, 50, 100, and 200 μM) inhibits RAGE, MCP-1, COX-2, IP-10 and NOX2 mRNA expression in THP-1 cells in a dose-dependent manner, after pretreatment 1 h befor S100b stimulatation for 4 hours[1].

LR-90 (0, 25, 50, 100, and 200 μM) dose-dependently and significantly blocks THP-1 cells adherence to endothelial cells after pretreatment 1 h befor S100b stimulatation for 24 hours[1].

LR-90 (0, 25, 50, 100, and 200 μM, for 24 hours) shows no effect on the cell viability of THP-1 cells[1].

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

Cell Viability Assay[1]

Cell Line:	THP-1 cells
Concentration:	0, 25, 50, 100, and 200 μM
Incubation Time:	24 hours
Result:	Showed no cytotoxicity to THP-1 cells.

RT-PCR[1]

Cell Line:	THP-1 cells
Concentration:	0, 25, 50, 100, and 200 μM
Incubation Time:	One hour before S100b addition for 4 hours
Result:	Dose-dependently inhibited mRNA expression of RAGE, MCP-1, COX-2, IP-10, and NOX2 stimulated with S100b.

In Vivo

LR-90 (50 mg/L, p.o. for 27 weeks) significantly reduces plasma lipids, modestly affects hyperglycaemia in ZDF rats[2].

LR-90 (50 mg/L) decreases renal AGE, AGER and lipid peroxidation[2].

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

Animal Model:	Male ZDF rats (13 to 40 weeks)[2]
Dosage:	50 mg/L
Administration:	P.O. for 27 weeks
Result:	Significantly reduced plasma triacylglycerol and cholesterol by ⊠55% and ⊠30%, respectively. Modestly affected hyperglycaemia and blood pressure. Lowered the body weight.

REFERENCES

[1]. Figarola JL, et al. Anti-inflammatory effects of the advanced glycation end product inhibitor LR-90 in human monocytes. Diabetes. 2007 Mar;56(3):647-55.

[2]. Figarola JL, et al. LR-90 prevents dyslipidaemia and diabetic nephropathy in the Zucker diabetic fatty rat. Diabetologia. 2008 May;51(5):882-91.

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