LOX-1/OLR1 Protein, Rat (HEK293, His)

Cat. No.:	HY-P73835
Synonyms:	Oxidized low-density lipoprotein receptor 1; LOX-1; OLR1; CLEC8A
Species:	Rat
Source:	HEK293
Accession:	O70156 (L60-Q364)
Gene ID:	140914
Molecular Weight:	Approximately 38-55 kDa due to the glycosylation

PROPERTIES

AA Sequence	L Q V S D L L K Q Y Q A N L T Q Q D H I L E G Q M S A Q K K A E N A S Q E S K R E L K E Q I D T L T W K L N E K S K E Q E K L L Q Q N Q N L Q E A L Q R A V N A S E E S K W E L K E Q I D I L N W K L N G I S K E Q K E L L Q Q N Q N L Q E A L Q K A E K Y S E E S Q R E L K E Q I D T L S W K L N E K S K E Q E E L L Q Q N Q N L Q E A L Q R A A N S S G P C P Q D W I W H K E N C Y L F H G P F N W E K S R E N C L S L D A Q L L Q I S T T D D L N F V L Q A T S H S T S P F W M G L H R K N P N H P W L W E N G S P L S F Q F F R T R G V S L Q M Y S S G T C A Y I Q G G V V F A E N C I L T A F S I C Q K K A N L L L T Q
Biological Activity	Measured by its binding ability in a functional ELISA. Immobilized Rat LOX-1 at 5 μg/mL (100 μL/well) can bind AGE-BSA, The ED_{50} for this effect is 0.724 μg/mL.
Appearance	Lyophilized powder
Formulation	Lyophilized from a 0.2 μm filtered solution of PBS, pH 7.4.
Endotoxin Level	<1 EU/μg, determined by LAL method.
Reconsititution	It is not recommended to reconstitute to a concentration less than 100 μg/mL in ddH_2O. For long term storage it is recommended to add a carrier protein (0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose).
Storage & Stability	Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.
Shipping	Room temperature in continental US; may vary elsewhere.

DESCRIPTION

Background	LOX-1/OLR1 Protein functions as a receptor that plays a crucial role in the recognition, internalization, and degradation of

oxidatively modified low-density lipoprotein (oxLDL) by vascular endothelial cells. OxLDL, a marker of atherosclerosis, induces endothelial cell activation and dysfunction, leading to pro-inflammatory responses, pro-oxidative conditions, and apoptosis. The association with oxLDL triggers the activation of NF-kappa-B, resulting in increased intracellular reactive oxygen species production and various pro-atherogenic cellular responses, including reduced nitric oxide release, monocyte adhesion, and apoptosis. Beyond its role in lipid metabolism, LOX-1/OLR1 acts as a receptor for HSP70, facilitating antigen cross-presentation to naive T-cells in dendritic cells and participating in cell-mediated antigen cross-presentation. Moreover, it is involved in inflammatory processes, acting as a leukocyte-adhesion molecule at the vascular interface during endotoxin-induced inflammation. Additionally, LOX-1/OLR1 serves as a receptor for advanced glycation end products, activated platelets, monocytes, apoptotic cells, and both Gram-negative and Gram-positive bacteria. It forms homodimers, potentially organizing into hexamers composed of three homodimers, and interacts with HSP70.

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