

## OLR1 Protein, Human (HEK293, His)

<b>Cat. No.:</b>	HY-P71180
<b>Synonyms:</b>	Oxidized Low-Density Lipoprotein Receptor 1; Ox-LDL Receptor 1; C-Type Lectin Domain Family 8 Member A; Lectin-Like Oxidized LDL Receptor 1; LOX-1; Lectin-Like oxLDL Receptor 1; hLOX-1; Lectin-Type Oxidized LDL Receptor 1; OLR1; CLEC8A; LOX1
<b>Species:</b>	Human
<b>Source:</b>	HEK293
<b>Accession:</b>	P78380 (S61-Q273)
<b>Gene ID:</b>	4973
<b>Molecular Weight:</b>	30-35 kDa

### PROPERTIES

<b>AA Sequence</b>	<p>S Q V S D L L T Q E    Q A N L T H Q K K K    L E G Q I S A R Q Q    A E E A S Q E S E N</p> <p>E L K E M I E T L A    R K L N E K S K E Q    M E L H H Q N L N L    Q E T L K R V A N C</p> <p>S A P C P Q D W I W    H G E N C Y L F S S    G S F N W E K S Q E    K C L S L D A K L L</p> <p>K I N S T A D L D F    I Q Q A I S Y S S F    P F W M G L S R R N    P S Y P W L W E D G</p> <p>S P L M P H L F R V    R G A V S Q T Y P S    G T C A Y I Q R G A    V Y A E N C I L A A</p> <p>F S I C Q K K A N L    R A Q</p>
<b>Biological Activity</b>	Measured in a cell proliferation assay using HUVEC cells. The ED <sub>50</sub> for this effect is 0.797 µg/ml, corresponding to a specific activity is 1.25×10 <sup>3</sup> units/mg.
<b>Appearance</b>	Lyophilized powder.
<b>Formulation</b>	Lyophilized from a 0.2 µm filtered solution of 20 mM PB, 150 mM NaCl, pH 7.2.
<b>Endotoxin Level</b>	<1 EU/µg, determined by LAL method.
<b>Reconstitution</b>	It is not recommended to reconstitute to a concentration less than 100 µg/mL in ddH <sub>2</sub> O. For long term storage it is recommended to add a carrier protein (0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose).
<b>Storage &amp; Stability</b>	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.
<b>Shipping</b>	Room temperature in continental US; may vary elsewhere.

### DESCRIPTION

<b>Background</b>	OLR1, a pivotal receptor, plays a crucial role in mediating the recognition, internalization, and degradation of oxidatively modified low-density lipoprotein (oxLDL) by vascular endothelial cells. The binding of oxLDL to OLR1 triggers vascular endothelial cell activation and dysfunction, leading to pro-inflammatory responses, increased oxidative conditions, and
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apoptosis, highlighting its significance as a marker of atherosclerosis. This interaction with oxLDL activates NF-kappa-B, resulting in heightened intracellular reactive oxygen species production and a range of pro-atherogenic cellular responses, including diminished nitric oxide release, increased monocyte adhesion, and apoptosis. Beyond its involvement in atherosclerosis, OLR1 acts as a receptor for the HSP70 protein, contributing to antigen cross-presentation to naive T-cells in dendritic cells and participating in cell-mediated antigen cross-presentation. Furthermore, OLR1 functions as a leukocyte-adhesion molecule at the vascular interface during endotoxin-induced inflammation and serves as a receptor for advanced glycation end products, activated platelets, monocytes, apoptotic cells, and both Gram-negative and Gram-positive bacteria. In the context of microbial infection, OLR1 may act as a receptor for adhesin A variant 3 (nadA) of *N.meningitidis*.

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

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