

Ox-LDL R-1 (H-140): sc-20753

BACKGROUND

The oxidized low density lipoprotein (Ox-LDL) receptor-1 (also designated LOX-1) is a type II membrane protein that is a member of the C-type lectin family and acts as a cell-surface receptor for Ox-LDL. Ox-LDL plays a role in early atherosclerosis, which includes the transformation of monocyte-derived macrophages to foam cells in atherosclerotic lesions. The binding of Ox-LDL to the Ox-LDL receptor-1 may also trigger the activation of the NF κ B signal transduction pathway. The Ox-LDL receptor-1 is expressed by vascular endothelial cells, smooth muscle cells, and macrophages. It is expressed endogenously as a precursor form with N-linked high mannose carbohydrate chains and as a mature form due to further glycosylation. The N-linked glycosylation of Ox-LDL R-1 appears to be necessary for adequate transportation to the cell surface and efficient ligand binding.

REFERENCES

1. Kataoka, H., et al. 1999. Expression of lectinlike oxidized low-density lipoprotein receptor-1 in human atherosclerotic lesions. *Circulation* 99: 3110-3117.
2. Dhaliwal, B.S. and Steinbrecher, U.P. 1999. Scavenger receptors and oxidized low density lipoproteins. *Clin. Chim. Acta* 286: 191-205.
3. Aoyama, T., et al. 1999. Structure and chromosomal assignment of the human lectin-like oxidized low-density-lipoprotein receptor-1 (LOX-1) gene. *Biochem. J.* 339: 177-184.
4. Murase, T., et al. 2000. Identification of soluble forms of lectin-like oxidized LDL receptor-1. *Arterioscler. Thromb. Vasc. Biol.* 20: 715-720.
5. Kataoka, H., et al. 2000. Biosynthesis and post-translational processing of lectin-like oxidized low density lipoprotein receptor-1 (LOX-1). N-linked glycosylation affects cell-surface expression and ligand binding. *J. Biol. Chem.* 275: 6573-6579.
6. Cominacini, L., et al. 2000. Oxidized low density lipoprotein (ox-LDL) binding to ox-LDL receptor-1 in endothelial cells induces the activation of NF κ B through an increased production of intracellular reactive oxygen species. *J. Biol. Chem.* 275: 12633-12638.

CHROMOSOMAL LOCATION

Genetic locus: OLR1 (human) mapping to 12p13.2.

SOURCE

Ox-LDL R-1 (H-140) is a rabbit polyclonal antibody raised against amino acids 1-140 mapping near the N-terminus of Ox-LDL R-1 of human origin.

PRODUCT

Each vial contains 200 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

APPLICATIONS

Ox-LDL R-1 (H-140) is recommended for detection of Ox-LDL R-1 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for Ox-LDL R-1 siRNA (h): sc-40185, Ox-LDL R-1 shRNA Plasmid (h): sc-40185-SH and Ox-LDL R-1 shRNA (h) Lentiviral Particles: sc-40185-V.

Molecular Weight of Ox-LDL R-1: 32 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

SELECT PRODUCT CITATIONS

1. Mango, R., et al. 2005. *In vivo* and *in vitro* studies support that a new splicing isoform of OLR1 gene is protective against acute myocardial infarction. *Circ. Res.* 97: 152-158.
2. Duerschmidt, N., et al. 2006. Lectin-like oxidized low-density lipoprotein receptor-1-mediated autophagy in human granulosa cells as an alternative of programmed cell death. *Endocrinology* 147: 3851-3860.
3. Mannheim, D., et al. 2008. Enhanced expression of Lp-PLA2 and lysophosphatidylcholine in symptomatic carotid atherosclerotic plaques. *Stroke* 39: 1448-1455.
4. Pandey, H., et al. 2011. Reciprocal coordination of a combination oral contraceptive containing desogestrel+ethinyl estradiol on the expression of LOX-1 and LDLR in placental trophoblast cells. *Contraception* 84: e43-e49.

RESEARCH USE

For research use only, not for use in diagnostic procedures.



Try **Ox-LDL R-1 (LOX19-22): sc-66155**, our highly recommended monoclonal alternative to Ox-LDL R-1 (H-140).