SANTA CRUZ BIOTECHNOLOGY, INC.

Ox-LDL R-1 (M-17): sc-11655

SANTA CRUZ BIOTECHNOLOGY
The Power to Question

BACKGROUND

The oxidized low density lipoprotein (lectin-like) receptor-1, Ox-LDL R-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 oxidized low density lipoprotein (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 Ox-LDL R-1 may also trigger the activation of the NFκB signal transduction pathway. Ox-LDL R-1, also designated scavenger receptor class E, member 1 (SCARE1); lectin-type oxidized LDL receptor 1 (LOX-1); and CLEC8A), 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 lectin-like 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 NFκB through an increased production of intracellular reactive oxygen species. J. Biol. Chem. 275: 12633-12638.
7. Li, D. and Mehta, J.L. 2000. Up-regulation of endothelial receptor for oxidized LDL (LOX-1) by oxidized LDL and implications in apoptosis of human coronary artery endothelial cells: evidence from use of antisense LOX-1 mRNA and chemical inhibitors. Arterioscler. Thromb. Vasc. Biol. 20: 1116-1122.
8. Minami, M., et al. 2000. Transforming growth factor-β-1 increases the expression of lectin-like oxidized low-density lipoprotein receptor-1. Biochem. Biophys. Res. Commun. 272: 357-361.

CHROMOSOMAL LOCATION

Genetic locus: Olr1 (mouse) mapping to 6 F3.

RESEARCH USE

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

SOURCE

Ox-LDL R-1 (M-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of Ox-LDL R-1 of mouse origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-11655 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Ox-LDL R-1 (M-17) is recommended for detection of Ox-LDL R-1 of mouse origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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 (m): sc-40186, Ox-LDL R-1 shRNA Plasmid (m): sc-40186-SH and Ox-LDL R-1 shRNA (m) Lentiviral Particles: sc-40186-V.

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

Positive Controls: mouse heart extract: sc-2254.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

SELECT PRODUCT CITATIONS

1. Barroso, E., et al. 2015. PPARβ/δ ameliorates fructose-induced insulin resistance in adipocytes by preventing Nrf2 activation. Biochim. Biophys. Acta 1852: 1049-1058.

STORAGE

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