

Ox-LDL R-1 (Y-21): sc-11653

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 NF κ B 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 lectinlike oxidized low-density lipoprotein receptor-1 in human atherosclerotic lesions. *Circulation* 99: 3110-3117.
2. Dhaliwal, B.S., et al. 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.

CHROMOSOMAL LOCATION

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

SOURCE

Ox-LDL R-1 (Y-21) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of Ox-LDL R-1 of mouse origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-11653 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

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 (Y-21) is recommended for detection of Ox-LDL receptor-1 of mouse and rat 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 siRNA (r): sc-156076, Ox-LDL R-1 shRNA Plasmid (m): sc-40186-SH, Ox-LDL R-1 shRNA Plasmid (r): sc-156076-SH, Ox-LDL R-1 shRNA (m) Lentiviral Particles: sc-40186-V and Ox-LDL R-1 shRNA (r) Lentiviral Particles: sc-156076-V.

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

Positive Controls: Mouse heart extract: sc-2254.

SELECT PRODUCT CITATIONS

1. Chui, P.C., et al. 2005. PPAR γ regulates adipocyte cholesterol metabolism via oxidized LDL receptor 1. *J. Clin. Invest.* 116: 2244-2256.
2. Yu, Y.H., et al. 2005. Fluvastatin prevents renal injury and expression of lectin-like oxidized low-density lipoprotein receptor-1 in rabbits with hypercholesterolemia. *Chin. Med. J.* 118: 621-626.
3. Spallarossa, P., et al. 2005. Doxorubicin-induced expression of LOX-1 in H9c2 cardiac muscle cells and its role in apoptosis. *Biochem. Biophys. Res. Commun.* 335: 188-196.
4. Yu, Y.H., et al. 2006. Intervention of Tongxinluo capsule against vascular lesion of atherosclerosis and its effect on lectin-like oxidized low density lipoprotein receptor-1 expression in rabbits. *Chin. J. Integr. Med.* 12: 32-36.
5. Wang, L.J., et al. 2008. Taurine rescues vascular endothelial dysfunction in streptozocin-induced diabetic rats: correlated with downregulation of LOX-1 and ICAM-1 expression on aortas. *Eur. J. Pharmacol.* 597: 75-80.
6. Vincent, A.M., et al. 2009. Dyslipidemia-induced neuropathy in mice: the role of oxLDL/LOX-1. *Diabetes* 58: 2376-2385.

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.


 MONOS
 Satisfaction
 Guaranteed

Try **Ox-LDL R-1 (X-4): sc-80268**, our highly recommended monoclonal alternative to Ox-LDL R-1 (Y-21).