SANTA CRUZ BIOTECHNOLOGY, INC.

Ox-LDL R-1 (X-4): sc-80268

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

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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. Li, D. and Mehta, J.L. 2000. Upregulation 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.
6. Minami, M., et al. 2000. Transforming growth factor β1 increases the expression of lectin-like oxidized low-density lipoprotein receptor-1. Biochem. Biophys. Res. Commun. 272: 357-361.
7. Kataoka, H., et al. 2000. Biosynthesis and posttranslational 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.
8. 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.

CHROMOSOMAL LOCATION

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

SOURCE

Ox-LDL R-1 (X-4) is a rat monoclonal antibody raised against full length recombinant Ox-LDL R-1 of mouse origin.

PRODUCT

Each vial contains 100 µg IgG_{2a} in 1.0 ml of PBS with < 0.1% sodium azide and protein stabilizer.

APPLICATIONS

Ox-LDL R-1 (X-4) 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), flow cytometry (1 µg per 1 x 10^6 cells) 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.

STORAGE

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

RESEARCH USE

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

PROTOCOLS

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