Purified Anti-Human LOX-1 Antibody[15C4]

catalog number: **AN006280P**

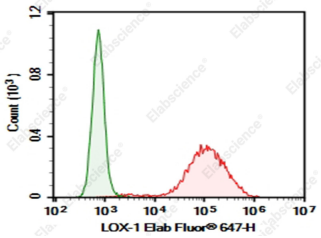
Note: *Centrifuge before opening to ensure complete recovery of vial contents.*

Description

Reactivity	Human
Immunogen	Recombinant Human LOX-1 protein
Host	Mouse
Isotype	Mouse IgG2a, κ
Clone	15C4
Purification	>98%, Protein A/G purified
Buffer	Phosphate-buffered solution, pH 7.2, containing 0.05% non-protein stabilizer. Dialyze to completely remove the stabilizer prior to labeling.

Applications	Recommended Dilution
FCM	≤ 0.2 μg per million cells in 100 μL volume

Data



HEK293T cells transfected with pcDNA3.1 plasmid encoding Human LOX-1 gene were stained with 0.2 μg Purified Anti-Human LOX-1 Antibody[15C4] (Right) and 0.2 μg Mouse IgG2a, κ Isotype Control (Left), followed by Elab Fluor® 647-conjugated Goat Anti-Mouse IgG Secondary Antibody.

Preparation & Storage

Storage	Store at 4°C valid for 12 months or -20°C valid for long term storage, avoid freeze / thaw cycles.
Shipping	Ice bag

Background

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Lectin-like oxidized low-density-lipoprotein receptor-1 (LOX-1), also known as oxidized low-density-lipoprotein receptor-1 (OLR-1), is a type II transmembrane receptor belonging to the C-type lectin family. It also belongs to the functionally defined scavenger receptor (SR) superfamily, whose members share the common ability to bind and internalize modified forms of Low Density Lipoproteins (LDL). LOX-1 is the first member of the class E scavenger receptor subfamily (SR-E). It binds and supports the internalization of multiple structurally unrelated macromolecules including oxidized LDL, advanced glycation end products (AGE), activated platelets, bacteria, apoptotic or aged cells, and heat shock proteins. LOX-1 has also been implicated as an intestinal receptor involved in the transcytosis of pancreatic bile salt-dependent lipase (8). The human LOX-1 gene encodes a 273 amino acid (aa) residue protein with a short N-terminal intracellular domain, a transmembrane domain, an extracellular stalk/neck region followed by a C-type lectin-like domain (CTLD). The CTLD, which is required for ligand recognition, contains the six conserved cysteine residues present in all C-type lectins, but lacks the Ca2+-binding residues found in classical C-type lectins. LOX-1 can be detected on activated endothelial cells, vascular smooth muscle cells, macrophages, intestinal cells and dendritic cells. The expression of LOX-1 is induced by proinflammatory or proatherogenic stimuli, as well as by oxidized LDL itself and hemodynamic or oxidative stress. Human LOX-1 exists on the cell surface as covalent homodimers, which can further associate into non-covalent-linked oligomers. Cell surface LOX-1 can also be cleaved by yet unidentified proteases to release the soluble LOX-1 extracellular domain (6). Binding and endocytosis of oxidized LDL by LOX-1 induces oxidative stress, activates NF kappa B, and upregulates the expression of monocyte chemoattractant protein-1 and matrix metalloproteases. LOX-1-dependent oxidized LDL uptake also induces apoptosis by inducing the expression of the pro-apoptotic Bax and downregulation of the anti-apoptotic Bcl-2. Oxidized LDL plays a key role in the pathogenesis of atherosclerosis and endothelial dysfunction. Blockade of LOX-1 functions may turn out to be a suitable target for the therapeutic intervention of atherosclerosis.

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