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10-3545: Monoclonal Antibody to human LOX-1(Discontinued)

Clonality :	Monoclonal
Clone Name :	23C11
Application :	FACS
Reactivity :	Human
Gene :	OLR1
Gene ID :	4973
Uniprot ID :	P78380
Alternative Name :	CLEC8A,Â LOX1, C-type lectin domain family 8 member A, Lectin-like oxidized LDL receptor 1
Isotype :	Mouse IgG2
Immunogen Information :	Fusion protein of extracellular domain (aa 71-273) of human LOX-1 with murine FcÎ³1 (LOX-1-muFc) produced in PEAK cells

Description

The monoclonal antibody 23C11 recognizes oxidized low-density lipoprotein receptor-1 (LOX-1). LOX-1 is a single-pass type II membrane protein (~45 kDa) and belongs to the C-type lectin-like protein superfamily. LOX-1 is expressed at high level in endothelial cells and vascular-rich organs such as placenta, lung, liver, brain aortic intima, bone marrow, spinal cord and substantia nigra. It is also expressed on the surface of dendritic cells. This unique scavenger receptor LOX-1 plays important roles in atherogenesis. LOX-1 mediates the recognition, internalization and degradation of oxidatively modified low density lipoprotein (oxLDL) by vascular endothelial cells. OxLDL is a marker of atherosclerosis, inducing vascular endothelial cell activation and dysfunction, resulting in pro-inflammatory responses, pro-oxidative conditions and apoptosis. LOX-1 associates with oxLDL inducing the activation of NF-kappa-B through an increased production of intracellular reactive oxygen and a variety of pro-atherogenic cellular responses including a reduction of nitric oxide (NO) release, monocyte adhesion and apoptosis. In addition to binding oxLDL, LOX-1 acts as a receptor for the HSP70 protein involved in antigen cross-presentation to naive T-cells in dendritic cells, thereby participating in cell-mediated antigen cross-presentation. LOX-1 is involved in the inflammatory process, by acting as a leukocyte-adhesion molecule at the vascular interface in endotoxin-induced inflammation. LOX-1 also acts as a receptor for advanced glycation end (AGE) products, activated platelets, monocytes, apoptotic cells and both Gram-negative and Gram-positive bacteria. The LOX-1 gene is a so-called immediate early gene that is dynamically modulated by several factors in vitro and in vivo. LOX-1 expression is induced by stimuli such as inflammatory cytokines, OxLDL, TNF-alpha, TGF-beta, and ANG II in vitro, and several proatherogenic factors in vivo. Monoclonal antibody 23C11 neutralizes LOX-1 and inhibits Hsp70 binding to dendritic cells and Hsp70-induced antigen cross-presentation. In vivo, targeting LOX-1 with a tumor antigen using anti-LOX-1 antibody 23C11 induces anti-tumor immunity.

Product Info

Amount :	1(Discontinued) / 500 µg
Content :	0.5 mg 0.2 µm filtered antibody solution in PBS, containing 0.1% bovine serum albumin and 0.02% sodium azide.
Storage condition :	Product should be stored at 4 °C. Under recommended storage conditions, product is stable for one year.

Application Note

FACS Analysis: 10 µg/ml antibody used on human peripheral blood myeloid DC and macrophages Functional Studies: antibody totally prevented Hsp70 binding to LOX-1-CHO but not mock-transfected CHO cells. For flow cytometry dilutions to be used depend on detection system applied. It is recommended that users test the reagent and determine their own

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optimal dilutions. The typical starting working dilution is 1:50. For functional studies, in vitro dilutions have to be optimized in user's experimental settting.