

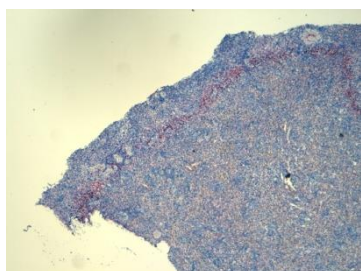
CERTIFICATE OF ANALYSIS – TECHNICAL DATA SHEET

Product name	LOX-1, Human, clone 23C11		
Catalog number	HM2138-20UG		
Lot number	-	Expiry date	-
Volume	200 µl	Amount	20 µg
Formulation	0.2 µm filtered in PBS+0.1%BSA	Concentration	100 µg/ml
Host Species	Mouse IgG1	Conjugate	None
Endotoxin	<24 EU/mg	Purification	Protein G
Storage	4°C		

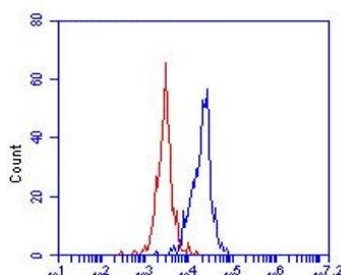
Application notes

	IHC-F	IHC-P	IF	FC	FS	IA	IP	W
Reference #			2	1,2,5	1,3,4			
Yes		•	•	•	•			
No								
N.D.	•					•	•	•

N.D.= Not Determined; IHC = Immuno histochemistry; F = Frozen sections; P = Paraffin sections; IF = Immuno Fluorescence; FC = Flow Cytometry; FS = Functional Studies; IA = Immuno Assays; IP = Immuno Precipitation; W = Western blot



IHC-P: Immunohistochemical analysis of human LOX-1(1:100) in paraffin embedded spleen tissue.



FC: Flow cytometry with PBMC cells. The red line represents the isotype control and the blue line HM2138 (R-PE labeled, 3 µg/ml).

Dilutions to be used depend on detection system applied. It is recommended that users test the reagent and determine their own optimal dilutions. The typical starting working dilution is 1:50.

- FC: 3 µg/ml antibody used on human peripheral blood myeloid DC and macrophages
- FS: Antibody totally prevented Hsp70 binding to LOX-1-CHO but not mock-transfected CHO cells (Ref 1)
- Positive control: Human PBMCs.

General Information

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.

Immunogen	Fusion protein of extracellular domain (aa 71-273) of human LOX-1 with murine Fcγ1 (LOX-1-muFc) produced in PEAK cells
Aliases	Lectin-like oxidized LDL receptor 1, Ox-LDL receptor 1, C-type lectin domain family 8 member A
Cross reactivity	Mouse: Yes (Ref.1 and 3).
References	<ol style="list-style-type: none">1. Delneste, Y et al; Involvement of LOX-1 in dendritic cell-mediated antigen cross-presentation. <i>Immunity</i> 2002, <i>17</i>: 3532. Jeannin, P et al; Complexity and complementarity of outer membrane protein A recognition by cellular and humoral innate immunity receptors. <i>Immunity</i> 2005, <i>22</i>: 5513. Parlato, S et al; LOX-1 as a natural IFN-α-mediated signal for apoptotic cell uptake and antigen presentation in dendritic cells. <i>Blood</i> 2010, <i>115</i>: 15544. Franceschi, C et al. A Novel Tumor-Associated Pancreatic Glycoprotein Is Internalized by Human Dendritic Cells and Induces Their Maturation. <i>The Journal of Immunology</i>, 2011, <i>186</i>: 40675. Barth, H et al. Scavenger Receptor Class B Is Required for Hepatitis C Virus Uptake and Cross-Presentation by Human Dendritic Cells. <i>J. Virol.</i> 2008, <i>82</i>:3466
Storage&stability	Product should be stored at 4°C. Under recommended storage conditions, product is stable for at least one year.
Precautions	For research use only. Not for use in or on humans or animals or for diagnostics. It is the responsibility of the user to comply with all local/state and federal rules in the use of this product. Hycult Biotech is not responsible for any patent infringements that might result from the use or derivation of this product.

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Approved by Manager of QC
Brenda Teunissen

Date
18/11/2020

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