Data Sheet (Cat.No.TMPY-03351)

TargetMol

LOX-1 Protein, Cynomolgus, Recombinant (His)

General Information

Synonyms:	oxidized low density lipoprotein (lectin-like) receptor 1;OLR1
Protein Construction:	A DNA sequence encoding the cynomolgus OLR1 (G7PJT2) (Ser61-Gln273) was expressed with a polyhistide tag at the N-terminus. Predicted N terminal: His
Species:	Cynomolgus
Expression Host:	HEK293 Cells
Accession:	G7PJT2
Molecular Weight:	26.9 kDa (predicted); 37 kDa (reducing conditions)

QC Testing

Biological Activity:	Activity testing is in progress. It is theoretically active, but we cannot guarantee it. If you require protein activity, we recommend choosing the eukaryotic expression version first.
Purity:	> 95 % as determined by SDS-PAGE
Endotoxin:	< 1.0 EU/μg of the protein as determined by the LAL method.
Formulation:	Lyophilized from a solution filtered through a 0.22 μm filter, containing PBS, pH 7.4. Typically, a mixture containing 5% to 8% trehalose, mannitol, and 0.01% Tween 80 is incorporated as a protective agent before lyophilization.

Preparation and Storage

Reconstitution:

A Certificate of Analysis (CoA) containing reconstitution instructions is included with the products. Please refer to the CoA for detailed information.

Stability & Storage:

It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

Protein Background

Oxidized low-density lipoprotein receptor 1 (Ox-LDL receptor 1 or OLR1), also known as lectin-type oxidized LDL receptor 1 (LOX1), is a receptor protein that belongs to the C-type lectin superfamily. LOX1 is a multi-ligand receptor originally identified as the endothelial oxidized LDL receptor. OLR1 / LOX1 was isolated from an aortic endothelial cell, and recently it has been discovered in macrophages and vascular smooth muscle cells in artery vessels. The expression of LOX1 is induced by inflammatory stimuli and oxidative stimuli. This protein binds,

internalizes, and degrades oxidized low-density lipoprotein. LOX1 may play an important role in the progression of vulnerable carotid plaque and might regulate vulnerable plaque formation in cooperation with MMPs and TIMP-2. In clinical, LOX1 is thought to be involved in the development of atherosclerotic lesions.

Reference

Hinagata J, et al. (2006) Oxidized LDL receptor LOX-1 is involved in neointimal hyperplasia after balloon arterial injury in a rat model. Cardiovasc Res. 69 (1): 263-71.

Melan MA, et al. (1994) The LOX1 Gene of Arabidopsis Is Temporally and Spatially Regulated in Germinating Seedlings. Plant Physiol. 105 (1): 385-93.

Saito A, et al. (2010) Relationship between lectin-like oxidized low-density lipoprotein receptor 1 expression and preoperative echogenic findings of vulnerable carotid plaque. Acta Neurochir (Wien). 152 (4): 589-95.

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