Overview

Product name: Anti-LMAN1 antibody [EPR6979]
Description: Rabbit monoclonal [EPR6979] to LMAN1
Host species: Rabbit
Tested applications: Suitable for: ICC/IF, WB, IHC-P
Unsuitable for: Flow Cyt or IP
Species reactivity: Reacts with: Mouse, Rat, Human
Immunogen: Synthetic peptide within Human LMAN1 aa 1-100. The exact sequence is proprietary.

General notes

This product is a recombinant monoclonal antibody, which offers several advantages including:
- High batch-to-batch consistency and reproducibility
- Improved sensitivity and specificity
- Long-term security of supply
- Animal-free production
For more information see here.

Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb® patents.

Properties

Form: Liquid
Storage instructions: Shipped at 4°C. Store at -20°C. Stable for 12 months at -20°C.
Storage buffer: pH: 7.20
Preservative: 0.01% Sodium azide
Constituents: 9% PBS, 40% Glycerol, 0.05% BSA, 50% Tissue culture supernatant
Purity: Tissue culture supernatant
Clonality: Monoclonal
Clone number  EPR6979
Isotype  IgG

Applications

Our Abpromise guarantee covers the use of ab125006 in the following tested applications.
The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

<table>
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<tr>
<th>Application</th>
<th>Abreviews</th>
<th>Notes</th>
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</thead>
<tbody>
<tr>
<td>ICC/IF</td>
<td>★★★★★</td>
<td>1/50 - 1/100.</td>
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<tr>
<td>WB</td>
<td>★★★★★</td>
<td>1/1000 - 1/10000. Detects a band of approximately 53 kDa (predicted molecular weight: 58 kDa).</td>
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<tr>
<td>IHC-P</td>
<td></td>
<td>1/100 - 1/250. Perform heat mediated antigen retrieval before commencing with IHC staining protocol. Heat up to 98 degrees C, below boiling, and then let cool for 10-20 min.</td>
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Application notes Is unsuitable for Flow Cyt or IP.

Target

Function  Mannose-specific lectin. May recognize sugar residues of glycoproteins, glycolipids, or glycosylphosphatidyl inositol anchors and may be involved in the sorting or recycling of proteins, lipids, or both. The LMAN1-MCFD2 complex forms a specific cargo receptor for the ER-to-Golgi transport of selected proteins.

Tissue specificity  Ubiquitous.

Involvement in disease  Defects in LMAN1 are THE cause of factor V and factor VIII combined deficiency type 1 (F5F8D1) [MIM:227300]: also known as multiple coagulation factor deficiency I (MCFD1). F5F8D1 is an autosomal recessive blood coagulation disorder characterized by bleeding symptoms similar to those in hemophilia or parahemophilia, that are caused by single deficiency of FV or FVIII, respectively. The most common symptoms are epistaxis, menorrhagia, and excessive bleeding during or after trauma. Plasma levels of coagulation factors V and VIII are in the range of 5 to 30% of normal.

Sequence similarities  Contains 1 L-type lectin-like domain.

Post-translational modifications  The N-terminal may be partly blocked.

Antibody: Anti-LMAN1 antibody [EPR6979] (ab125006)

Lanes:
- **All lanes**: Anti-LMAN1 antibody [EPR6979] (ab125006) at 1/1000 dilution
- **Lane 1**: Wild-type HEK-293T cell lysate
- **Lane 2**: LMAN1 knockout HEK-293T cell lysate
- **Lane 3**: HeLa cell lysate
- **Lane 4**: Daudi cell lysate

Lysates/proteins at 20 µg per lane.

Performed under reducing conditions.

**Predicted band size**: 58 kDa

**Observed band size**: 55 kDa

Why is the actual band size different from the predicted?

Lanes 1-4: Merged signal (red and green). Green - ab125006 observed at 55 kDa. Red - loading control ab8245 observed at 37 kDa.

ab125006 Anti-LMAN1 antibody [EPR6979] was shown to specifically react with Protein ERGIC-53 in wild-type HEK-293T cells. Loss of signal was observed when knockout cell line ab266248 (knockout cell lysate ab257505) was used. Wild-type and Protein ERGIC-53 knockout samples were subjected to SDS-PAGE. ab125006 and Anti-GAPDH antibody [6C5] - Loading Control (ab8245) were incubated overnight at 4°C at 1 in 1000 Dilution and 1 in 20000 dilution respectively. Blots were developed with Goat anti-Rabbit IgG H&L (IRDye® 800CW) preadsorbed (ab216773) and Goat anti-Mouse IgG H&L (IRDye® 680RD) preadsorbed (ab216776) secondary antibodies at 1 in 20000 dilution for 1 hour at room temperature before imaging.
Immunocytochemistry/ Immunofluorescence - Anti-LMAN1 antibody [EPR6979] (ab125006)

ICC/IF image of ab125006 stained HeLa cells. The cells were 100% methanol fixed (5 min) and then incubated in 1%BSA / 10% normal goat serum / 0.3M glycine in 0.1% PBS-Tween for 1h to permeabilise the cells and block non-specific protein-protein interactions. The cells were then incubated with the antibody ab125006 at 1/100 dilution overnight at +4°C. The secondary antibody (pseudo-colored green) was Alexa Fluor® 488 goat anti-rabbit (ab150081) IgG (H+L) preadsorbed, used at a 1/1000 dilution for 1h. Alexa Fluor® 594 WGA was used to label plasma membranes (pseudo-colored red) at a 1/200 dilution for 1h at room temperature. DAPI was used to stain the cell nuclei (pseudo-colored blue) at a concentration of 1.43µM for 1hour at room temperature.

ab125006 at 1/100 dilution staining LMAN1 in paraffin-embedded Human kidney tissue by Immunohistochemistry.
Perform heat mediated antigen retrieval before commencing with IHC staining protocol.

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-LMAN1 antibody [EPR6979] (ab125006)

Western blot - Anti-LMAN1 antibody [EPR6979] (ab125006)

All lanes : Anti-LMAN1 antibody [EPR6979] (ab125006) at 1/1000 dilution
Lane 1 : HeLa cell lysate
Lane 2 : 293T cell lysate
Lane 3 : SH-SY5Y cell lysate
Lane 4 : NCI-H460 cell lysate
Lane 5 : Jurkat cell lysate
Lane 6 : JAR cell lysate
Lysates/proteins at 10 µg per lane.

Secondary
All lanes : Goat anti-Rabbit HRP at 1/2000 dilution
**Predicted band size:** 58 kDa

ab125006 at 1/100 dilution staining LMAN1 in paraffin-embedded Human papillary carcinoma of thyroid gland tissue by Immunohistochemistry.

Perform heat mediated antigen retrieval before commencing with IHC staining protocol.

**Please note:** All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

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