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Human LAMP1 Ready-To-Use IHC Kit

Cat. No.: IHC0137H

Sample Type: FFPE tissue **Size: 50T (including 1 control slide)**

Storage and Stability: Please store components at the temperatures indicated on the individual tube labels. The kit is stable for 6 months from the date of receipt.

General Information

Number	Component	Size	Concentration	Storage
1	PBS Buffer (powder)	2 L×2	20x	RT
2	Antigen Retrieval Buffer	20 ml	100x	2-8℃
3	Endogenous Peroxidase Blocking Buffer	3 ml	RTU	2-8℃
4	Blocking Buffer	3 ml	RTU	2-8℃
5	Primary Antibody (Human LAMP1 Rabbit pAb)	6 ml	RTU	2-8℃
6	Secondary Antibody (HRP-Goat anti-Rabbit IgG pAb)	6 ml	RTU	2-8℃
7	Chromogen Component A	0.3 ml	RTU	-20℃
8	Chromogen Component B	0.3 ml	RTU	-20℃
9	Counter Staining Reagent	5 ml	RTU	RT
10	Differentiation Reagent	6 ml	RTU	RT
11	Mounting Media	5 ml	RTU	RT
12	Control slide (Human lung carcinoma)	1 slide	RTU	RT
13	Datasheet	1 copy		

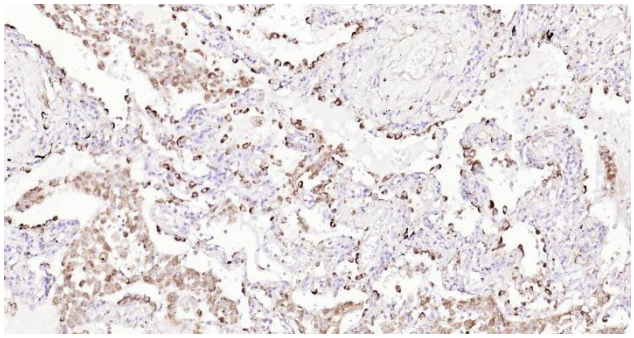
Background

LAMP1 (CD107a, lysosome-associated membrane protein-1) together with LAMP-2, is a major constituent of lysosomal membrane, 1-2% of total CD107a is found also on the plasma membrane. LAMP1 is a heavily glycosylated membrane protein which contains a putative signal peptide, 18 sites for N-linked glycosylation, a single membrane-spanning segment and a short (11 amino acid) cytosolic tail. The LAMP proteins are involved in lysosome biogenesis and are required for fusion of lysosomes with phagosomes. LAMP1 is a type 1 integral membrane protein that is transported from trans-Golgi network to endosomes and then lysosomes. Upon cell activation, LAMP1 transfer to the plasma membrane is dependent on a carboyxl-terminal tyrosine based motif (YXXI). Perturbation in the spacing between the tyrosine based motif relative to the membrane abolishes lysosome localization of LAMP1, and this mutant protein then cycles between the plasma membrane and the endosome. Cell surface LAMP1 (and LAMP2) have been shown to promote adhesion of human peripheral blood mononuclear cells (PBMC) to vascular endothelium, therefore, they are possibly involved in the adhesion of PBMC to the site of inflammation. Increased LAMP1 immunoreactivity is observed in neurons and glial cells surrounding senile plaques in Alzheimer's Disease (AD) cases, and is localized in medullary epithelial cells, single macrophages and lymphocytes in acute thymic involution. LAMP1 is a good marker of mast cell activation.

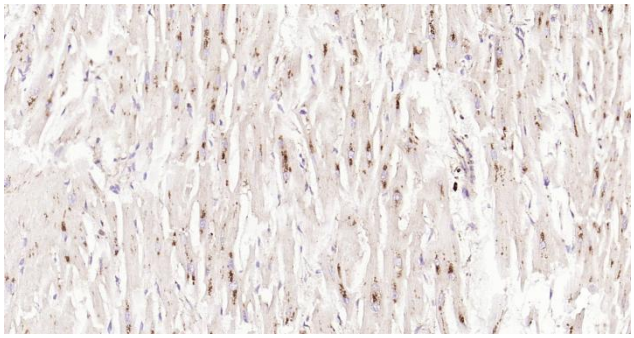
Synonyms

CD107 antigen like family member A,CD107 antigen-like family member A,CD107a,CD107a antigen,LAMP 1,LAMP-1,LAMP1_HUMAN,LAMPA,LGP120,lgpA

Validation Data



Immunohistochemical analysis of paraffin embedded human lung carcinoma tissue slide using IHC0137H (Human LAMP1 IHC Kit).



Immunohistochemical analysis of paraffin embedded human heart tissue slide using IHC0137H (Human LAMP1 IHC Kit).

Immunohistochemistry Protocol

1. Deparaffinization And Rehydration

Immerse slides in fresh xylene for 15 minutes and then repeat two more times using separate containers. Immerse slides sequentially in 100%, 95%, 90%, 80%, and 70% ethanol solutions for 5 minutes each. Rinse slides 3 times with distilled water for 5 minutes each.

2. Antigen Retrieval

Add 100×**Antigen Retrieval Buffer** into distilled water to prepare a 1×solution. Boil slides in 1×solution at 95°C-100°C for 15 minutes. Move the slides to 1×solution at room temperature (RT) and allow them to stand for 20 minutes. Rinse 3 times with **PBS Buffer** (dissolve the powder in 2L distilled water) for 5 minutes each.

3. Block Endogenous Peroxidase

Drain the liquid off the slides and then use a hydrophobic IHC pen to draw circles on the slides around tissue sections. Add 2-4 drops of **Endogenous Peroxidase Blocking Buffer** directly on slides, covering the whole tissue and block slides for 15 minutes at RT. Rinse 3 times with **PBS Buffer** for 5 minutes each.

4. Serum Blocking

Block with 2-4 drops of **Blocking Buffer** for 20 minutes at RT.

5. Primary Antibody Incubation

Drain blocking buffer from slides. Incubate slides with 2-4 drops of **Human LAMP1 Rabbit pAb** overnight at 4°C or 1-2 hours at RT. Rinse 3 times with **PBS Buffer** for 5 minutes each.

6. Secondary Antibody Incubation

Incubate slides with 2-4 drops of **HRP-Goat anti-Rabbit IgG pAb** for 1-2 hours at RT. Rinse slides 3 times with **PBS Buffer** for 5 minutes each.

7. Signal Development

Remove residual liquid around the tissue section. Add 50ul fresh **DAB Buffer** (**Chromogen Component A : Chromogen Component B : PBS Buffer=1:1:18**) to cover the tissue. Monitor the reaction under the microscope until a brown color is visible (approximate 3-5 minutes at RT). Stop reaction immediately by rinsing with distilled water. Rinse slides 3 times with distilled water for 5 minutes each.

8. **Counterstain**

Counterstain with an appropriate amount of **Counter Staining Reagent** for 3-5 minutes at RT. Rinse slides with distilled water for 5 minutes. Use 2-4 drops of **Differentiation reagent** to cover the tissue for 30 seconds. Rinse slides twice with distilled water for 5 minutes each.

9. Dehydration Sheet

Immerse slides sequentially in 70%, 80%, 90%, 95%, and 100% ethanol for 5 minutes each at RT. Immerse slides in 2 changes of fresh xylene, 15 minutes each. Drop some **Mounting Media** on the tissue. Mount coverslips.

Notes

1. The positive control slide provided in the kit allows you to be sure that the experimental set-up is working properly.
2. Do not allow slides to dry at any time during this procedure.
3. Please don't replace the matching reagents in this product with other manufacturers' products.
4. As DAB is a carcinogen, please take necessary precautions.
5. PBS (reagent 1) can be stored for one week at 4℃ after preparation; The antigen retrieval buffer (1×reagent 2) and the chromogenic agent (the mixture of reagents 7 and 8) should be prepared right before each assay.

Please cite this product as " IHC0137H, Bioss Antibodies". Citation example: "Human tissue sections using Human LAMP1 IHC Kit (IHC0137H, Bioss Antibodies) were stained for LAMP1 according to the manufacturer's instructions.