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LAG3 Antibody (Center)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP6987c

Product Information

Application	WB, IHC-P, FC, E
Primary Accession	P18627
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB21775
Calculated MW	57449
Antigen Region	103-132

Additional Information

Gene ID	3902
Other Names	Lymphocyte activation gene 3 protein, LAG-3, Protein FDC, CD223, LAG3, FDC
Target/Specificity	This LAG3 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 103-132 amino acids from the Central region of human LAG3.
Dilution	WB~~1:2000 IHC-P~~1:100~500 FC~~1:25 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	LAG3 Antibody (Center) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	LAG3 {ECO:0000303|PubMed:35761082, ECO:0000312|HGNC:HGNC:6476}
Function	[Lymphocyte activation gene 3 protein]: Inhibitory receptor on antigen activated T-cells (PubMed:20421648, PubMed:35761082, PubMed:7805750, PubMed:8647185). Delivers inhibitory signals upon binding to ligands, such as MHC class II, its main ligand present at the surface of antigen-presenting cells

(APCs), and FGL1, which is secreted by hepatocytes and certain types of tumor cells (PubMed:30580966, PubMed:32920841, PubMed:35761082, PubMed:39671469, PubMed:7589152, PubMed:8647185, PubMed:9159144). Ligand-binding initiates a signaling that inhibits the T-cell receptor (TCR) in the immunological synapse, preventing T-cell activation (PubMed:40101708). Mechanistically, ligand-binding promotes (1) ubiquitination of the KIEELE motif, unleashing the RRFSALE motif from the membrane and (2) leading to the formation of condensates with the TCR component CD3E, thereby disrupting the association between CD3E and LCK and preventing TCR activation (PubMed:40101708, PubMed:40592325). May inhibit antigen-specific T-cell activation in synergy with PDCD1/PD-1 (By similarity). Negatively regulates the proliferation, activation, effector function and homeostasis of both CD8(+) and CD4(+) T-cells (PubMed:20421648, PubMed:7805750, PubMed:8647185). Also mediates immune tolerance: constitutively expressed on a subset of regulatory T-cells (Tregs) and contributes to their suppressive function (By similarity). Also acts as a negative regulator of plasmacytoid dendritic cell (pDCs) activation (By similarity).

Cellular Location

[Lymphocyte activation gene 3 protein]: Cell membrane; Single-pass type I membrane protein. Note=Clusters on the T-cell surface following ligand-binding

Tissue Location

Primarily expressed in activated T-cells and a subset of natural killer (NK) cells.

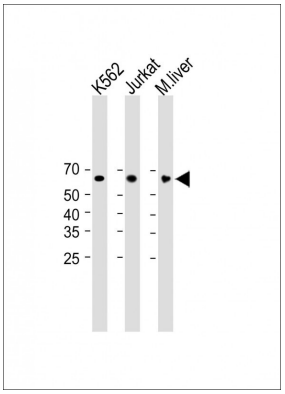
Background

Lymphocyte-activation protein 3 belongs to Ig superfamily and contains 4 extracellular Ig-like domains.

References

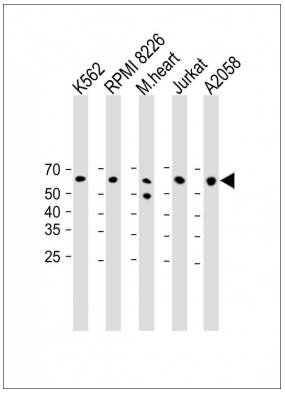
Smyth,D.J., et.al., BMC Med. Genet. 7, 20 (2006)

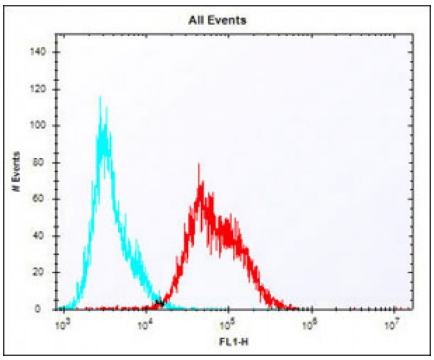
Images



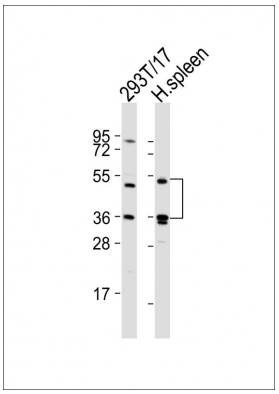
All lanes : Anti-LAG3 Antibody (Center) at 1:1000 dilution Lane 1: K562 whole cell lysate Lane 2: Jurkat whole cell lysate Lane 3: M. liver whole cell lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated (ASP1615) at 1/15000 dilution. Observed band size : 57kDa Blocking/Dilution buffer: 5% NFDM/TBST.

All lanes : Anti-LAG3 Antibody (Center) at 1:1000 dilution Lane 1: K562 whole cell lysate Lane 2: RPMI 8226 whole cell lysate Lane 3: Mouse heart tissue lysate Lane 4: Jurkat whole cell lysate Lane 5: A2058 whole cell lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated (ASP1615) at 1/15000 dilution. Observed band size : 57kDa Blocking/Dilution buffer: 5% NFDM/TBST.

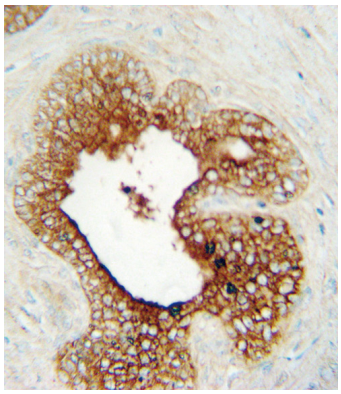




Overlay histogram showing Jurkat cells stained with AP6987C (red line). The cells were fixed with 2% paraformaldehyde (10 min) and then permeabilized with 90% methanol for 10 min. The cells were then icubated in 2% bovine serum albumin to block non-specific protein-protein interactions followed by the antibody (AP6987C, 1:25 dilution) for 60 min at 37ºC. The secondary antibody used was Alexa Fluor® 488 goat anti-rabbit lgG (H+L) (1583138) at 1/400 dilution for 40 min at 37ºC. Isotype control antibody (blue line) was rabbit IgG1 (1µg/1x10^6 cells) used under the same conditions. Acquisition of >10, 000 events was performed.



All lanes : Anti-LAG3 Antibody (Center) at 1:2000 dilution Lane 1: 293T/17 whole cell lysates Lane 2: human spleen lysates Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution Predicted band size : 57 kDa Blocking/Dilution buffer: 5% NFDM/TBST.



LAG3 Antibody (Center) (Cat. #AP6987c) immunohistochemistry analysis in formalin fixed and paraffin embedded human prostate carcinoma followed by peroxidase conjugation of the secondary antibody and DAB staining. This data demonstrates the use of the LAG3 Antibody (Center) for immunohistochemistry. Clinical relevance has not been evaluated.