

LAG3 Antibody

Catalog # ASC12109

Product Information

Application	WB, IHC-P, IF, E
Primary Accession	P18627
Other Accession	NP_002277
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Clone Names	LAG3
Calculated MW	57449

Additional Information

Gene ID	3902
Alias Symbol	LAG3
Other Names	LAG3 Antibody: lymphocyte activating 3, LAG-3, CD223
Target/Specificity	At least two antibodies are known to exist; this antibody will only detect the largest isoform.
Reconstitution & Storage	LAG3 antibody can be stored at 4 °C for three months and -20 °C, stable for up to one year. As with all antibodies care should be taken to avoid repeated freeze thaw cycles. Antibodies should not be exposed to prolonged high temperatures.
Precautions	LAG3 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	LAG3 (HGNC:6476)
Synonyms	FDC
Function	Lymphocyte activation gene 3 protein: Inhibitory receptor on antigen activated T-cells (PubMed: 20421648 , PubMed: 7805750 , PubMed: 8647185). Delivers inhibitory signals upon binding to ligands, such as FGL1 (By similarity). FGL1 constitutes a major ligand of LAG3 and is responsible for LAG3 T-cell inhibitory function (By similarity). Following TCR engagement, LAG3 associates with CD3-TCR in the immunological synapse and directly inhibits T-cell activation (By similarity). May inhibit antigen-specific T-cell activation in synergy with PDCD1/PD-1, possibly by acting as a coreceptor for 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). Binds MHC class II (MHC-II); the precise role of MHC-II-binding is however unclear (PubMed:[8647185](#)).

Cellular Location [Lymphocyte activation gene 3 protein]: Cell membrane; Single-pass type I membrane protein

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

Background

The lymphocyte activation gene-3 (LAG3) is a member of the immunoglobulin superfamily and binds MHC class II with high affinity (1), negatively regulating T-cell function and homeostasis (2). It is expressed in B, T, and NK cells, monocytes, and dendritic cells (3), and acts to regulate T cell expansion (4). LAG3 is also an important immune checkpoint protein, with anti-LAG3 antibodies activating T effector cells and affecting regulatory T cell functions. Furthermore LAG3 appears to act in a synergistic fashion with PD-1/PD-L1, suggesting that a dual antibody approach may prove useful in cancer immunotherapy (5).

References

Huard B, Tournier M, Hercend T, et al. Lymphocyte-activation gene 3/major histocompatibility complex class II interaction modulates the antigenic response of CD4⁺ T lymphocytes. *Eur J Immunol* 1994; 24:3216–21. Triebel F. LAG-3: a regulator of T-cell and DC responses and its use in therapeutic vaccination. *Trends Immunol* 2003; 24:619–22. Workman CJ, Wang Y, El Kasmi KC, et al. LAG-3 regulates plasmacytoid dendritic cell homeostasis. *J Immunol*. 2009; 182:1885–91. Workman CJ, Vignali DA. The CD4-related molecule, LAG-3 (CD223), regulates the expansion of activated T cells. *Eur J Immunol* 2003; 33:970–9.

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