

LAG3 Antibody [7A7]

Catalog # ASC12165

Product Information

Application	ICC, E
Primary Accession	P18627
Other Accession	NP_002277
Host	Mouse
Clonality	Monoclonal
Isotype	IgG2a,k
Clone Names	LAG3
Calculated MW	57449

Additional Information

Gene ID	3902
Alias Symbol	LAG3
Other Names	LAG3 Antibody: lymphocyte activating 3, LAG-3, CD223

Reconstitution & Storage	LAG-3 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.
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Precautions	LAG3 Antibody [7A7] is for research use only and not for use in diagnostic or therapeutic procedures.
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Protein Information

Name	LAG3 (HGNC:6476)
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Synonyms	FDC
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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
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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.

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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