Anti-Human LAG-3 Antibody [PSH05-30] - BSA and Azide free (Detector)

HA722259

Product Type:	Recombinant Rabbit monoclonal IgG, primary antibodies
Species reactivity:	Human
Applications:	ELISA(Det)
Molecular Wt:	Predicted band size: 57 kDa
Clone number:	PSH05-30

Description: Lymphocyte-activation gene 3, also known as LAG-3, is a protein which in humans is encoded by the LAG3 gene. LAG3, which was discovered in 1990 and was designated CD223 (cluster of differentiation 223) after the Seventh Human Leucocyte Differentiation Antigen Workshop in 2000, is a cell surface molecule with diverse biologic effects on T cell function. It is an immune checkpoint receptor and as such is the target of various drug development programs by pharmaceutical companies seeking to develop new treatments for cancer and autoimmune disorders. In soluble form it is also being developed as a cancer drug in its own right. LAG3's main ligand is MHC class II, to which it binds with higher affinity than CD4. The protein negatively regulates cellular proliferation, activation, and homeostasis of T cells, in a similar fashion to CTLA-4 and PD-1 and has been reported to play a role in Treg suppressive function. Fibrinogen-like protein1 FGL1, a liver-secreted protein, is another (major) LAG3 functional ligand independent of MHC-II. LAG3 also helps maintain CD8+ T cells in a tolerogenic state and, working with PD-1, helps maintain CD8 exhaustion during chronic viral infection. LAG3 is known to be involved in the maturation and activation of dendritic cells.

Immunogen: Recombinant protein within human LAG-3 aa 23-450 (P18627).

Positive control: Recombinant standard Human LAG-3 protein (HA210934).

Subcellular location: Cell membrane; Secreted.

Database links: SwissProt: P18627 Human

Recommended Dilutions:

ELISA(Det) Use at an assay dependent concentration. Can be paired for Sandwich ELISA with Rabbit monoclonal [PSH05-29] to Human LAG-3 (Capture) (HA722258) and recombinant Human LAG-3 protein (HA210934) as the standard. The reference range value is 20.6-5000pg/ml.

Storage Buffer: PBS (pH7.4).

Storage Instruction: Store at +4℃ after thawing. Aliquot store at -20℃. Avoid repeated freeze / thaw cycles.

Purity: Protein A affinity purified.

Images

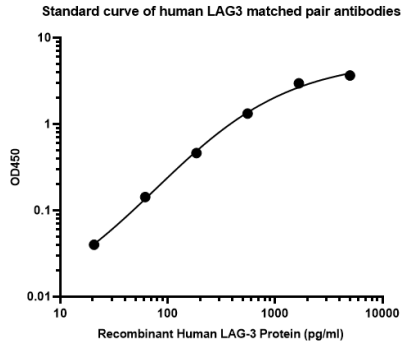

Fig1: Sandwich ELISA analysis of Human LAG3 matched pair antibodies

Elisa assay was performed by coating wells of a 96-well plate with 100 µl per well of capture antibody (HA722258) diluted in carbonate/bicarbonate buffer, at a concentration of 2 µg/ml overnight at 4℃. Wells of the plate were washed, blocked with 150 µl 0.05% tween-20 1% BSA blocking buffer, and incubated with serial diluted Recombinant standard Human LAG-3 protein (HA210934) starting from 5000 pg/ml to 0 pg/ml and detect antibody (HA722259, Biotin, 0.2 µg/ml) for 1 hour at 30℃ with shaking. Then the plate was washed and incubated with 100 µl per well of SA-HRP for 0.5 hour at 30℃ with shaking. Detection was performed using an Ultra TMB Substrate for 10 minutes at room temperature in the dark. The reaction was stopped with sulfuric acid and absorbances were read on a spectrophotometer at 450 nm.

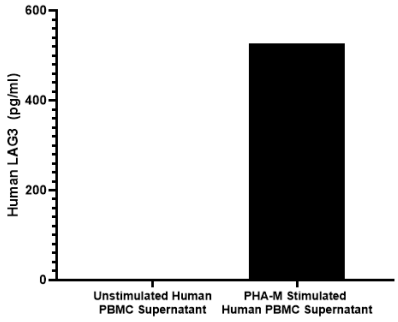

Fig2: Conditioned media was harvested after 48 hours. LAG3 was measured in 100% unstimulated and PHA-M stimulated human PBMC cell supernatant. The concentrations of LAG3 were interpolated from the LAG3 standard curves. The mean LAG3 concentration was determined to be 526 pg/mL in PHA-M stimulated human PBMC cell supernatant. There was no detectable signal in unstimulated supernatant.

Background References

1. Chocarro L et al. Understanding LAG-3 Signaling. Int J Mol Sci. 2021 May
2. Maruhashi T et al. LAG-3: from molecular functions to clinical applications. J Immunother Cancer. 2020 Sep