

## LAG-3 Protein, Rat (HEK293, His)

Cat. No.:	HY-P74788
Synonyms:	Lymphocyte activation gene 3 protein; Protein FDC; CD223
Species:	Rat
Source:	HEK293
Accession:	Q5BK54 (G24-L442)
Gene ID:	297596
Molecular Weight:	Approximately 55 kDa

### PROPERTIES

Appearance	Lyophilized powder.
Formulation	Lyophilized from a 0.2 µm filtered solution of 20 mM NaAc, 500 mM NaCl, 10 % glycerol, 0.02 % tween 20, pH 5.5.
Endotoxin Level	<1 EU/µg, determined by LAL method.
Reconstitution	It is not recommended to reconstitute to a concentration less than 100 µg/mL in ddH <sub>2</sub> O.
Storage & Stability	Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.
Shipping	Room temperature in continental US; may vary elsewhere.

### DESCRIPTION

Background	<p>LAG-3 (Lymphocyte activation gene 3) protein serves as an inhibitory receptor on antigen-activated T-cells, delivering inhibitory signals upon binding to ligands such as FGL1, a major contributor to LAG3's T-cell inhibitory function. Upon T-cell receptor (TCR) engagement, LAG3 associates with CD3-TCR in the immunological synapse, directly impeding T-cell activation. LAG3 may collaborate with PDCD1/PD-1, potentially acting as a coreceptor for PD-1, to inhibit antigen-specific T-cell activation. This protein negatively regulates the proliferation, activation, effector function, and homeostasis of both CD8(+) and CD4(+) T-cells. Furthermore, LAG-3 plays a pivotal role in immune tolerance, being constitutively expressed on a subset of regulatory T-cells (Tregs), contributing to their suppressive function. Additionally, LAG-3 acts as a negative regulator of plasmacytoid dendritic cell (pDCs) activation and exhibits interactions with MHC class II (MHC-II), although the precise role of MHC-II binding remains unclear. LAG-3 may function as a ligand for MHC class II on antigen-presenting cells (APC), potentially promoting APC activation/maturation and driving Th1 immune responses.</p>
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**Caution: Product has not been fully validated for medical applications. For research use only.**

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