Recombinant Human VISTA/B7-H5/PD-1H His-tag

Catalog Number: 9057-B7

DESCRIPTION

Source	Mouse myeloma cell line, NS0-derived human VISTA/B7-H5/PD-1H protein Phe33-Ala194, with an Asp187Glu substitution and a C-terminal 6-His tag Accession # Q9H7M9
N-terminal Sequence Analysis	Phe33
Predicted Molecular Mass	19 kDa

SPECIFICATIONS

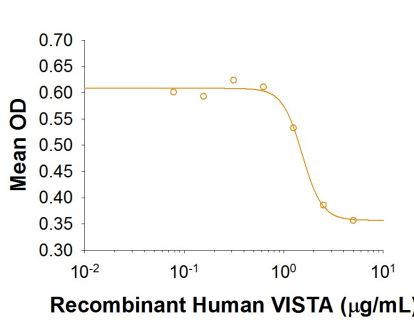
SDS-PAGE	30-65 kDa, reducing conditions
Activity	Measured by its ability to inhibit anti-CD3 antibody induced IL-2 secretion in human T lymphocytes. The ED_{50} for this effect is 0.5-3 µg/mL.
Endotoxin Level	<0.10 EU per 1 µg of the protein by the LAL method.
Purity	>95%, by SDS-PAGE visualized with Silver Staining and quantitative densitometry by Coomassie® Blue Staining.
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS. See Certificate of Analysis for details.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 200 µg/mL in PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	**Use a manual defrost freezer and avoid repeated freeze-thaw cycles.** • 12 months from date of receipt, -20 to -70 °C as supplied. • 1 month, 2 to 8 °C under sterile conditions after reconstitution. • 3 months, -20 to -70 °C under sterile conditions after reconstitution.

DATA

Bioactivity



Recombinant Human VISTA/B7-H5/PD-1H inhibits anti-CD3 antibody induced IL-2 secretion in human T lymphocytes. The ED_{50} for this effect is 0.5-3 µg/mL.

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BACKGROUND

Platelet receptor Gi24, also known as Dies1, VISTA, SISP1 and B7-H5, is a 55-65 kDa transmembrane glycoprotein with homology to B7-like immune costimulatory molecules (1, 2). Mature human Gi24 contains a 162 amino acid (aa) extracellular domain (ECD) with one V-type Ig-like domain, a 21 aa transmembrane segment, and a 96 aa cytoplasmic domain. Within the ECD, human Gi24 shares 70% and 67% aa sequence identity with mouse and rat Gi24, respectively (3). The 30 kDa ECD can be shed by MT1-MMP, with a 25-30 kDa fragment remaining in the membrane (3). Gi24 promotes both MT1-MMP expression and the MT1-MMP mediated activation of MMP-2 (3). Gi24 supports the differentiation of embryonic stem cells (ESC) and enhances BMP-4 induced signaling in ESC, but is also down-regulated following BMP-4 exposure (4, 5). It binds to BMP-4 directly, and also associates with the type I BMP receptor Activin RIB/ALK-4 (4, 5). Gi24 is expressed on the surface of naïve $CD4^+$ T cells, regulatory T cells, and adipocytes (6, 7). It is up-regulated *in vivo* on activated monocytes and dendritic cells (5). Gi24 inhibits $CD4^+$ and $CD8^+$ T cell proliferation, and their production of IL-2 and IFN-γ (6). Its expression on tumor cells attenuates the anti-tumor immune response and enables more rapid tumor progression (6). In contrast, Gi24 limits disease progression in the autoimmune disease model EAE (6). Gi24 also acts as a co-inhibitory receptor on alloreactive T cells to regulate T cell tolerance (8).

References:

1. Flajnik, M.F. *et al.* (2012) Immunogenetics **64**:571.
2. Wilcox, R.A. *et al.* (2012) Eur. J. Haematol. **88**:465.
3. Sakr, M.A. *et al.* (2010) Cancer Sci. **101**:2368.
4. Aloia, L. *et al.* (2010) J. Biol. Chem. **285**:7776.
5. Parisi, S. *et al.* (2012) FASEB J. **26**:3957.
6. Wang, L. *et al.* (2011) J. Exp. Med. **208**:577.
7. Ren, G. *et al.* (2013) PLoS One **8**:e65531.
8. Flies, D.B. *et al.* (2015) J. Immunol. **194**:5294.

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