

DESCRIPTION

Source	Mouse myeloma cell line, NS0-derived human VISTA/B7-H5/PD-1H protein		
	Human VISTA/B7-H5/PD-1H (Phe33-Ala194) Accession # AAH20568	IEGRMD	Human IgG ₁ (Pro100-Lys330)
	N-terminus		C-terminus
N-terminal Sequence Analysis	Phe33		
Structure / Form	Disulfide-linked homodimer		
Predicted Molecular Mass	44.8 kDa (monomer)		

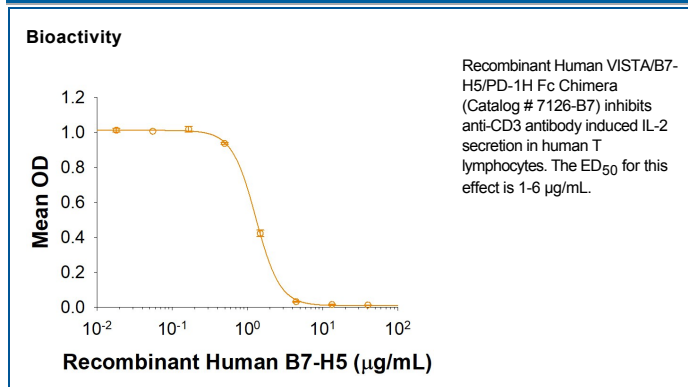
SPECIFICATIONS

SDS-PAGE	64-75 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 1-6 µg/mL.
Endotoxin Level	<0.01 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	<p>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</p> <ul style="list-style-type: none"> • 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



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 co-stimulatory 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 and regulatory T cells (6). 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).

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.