**DESCRIPTION**

**Source**
Mouse myeloma cell line, NS0-derived

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<table>
<thead>
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<tbody>
<tr>
<td><strong>Human VISTA/B7-H5/PD-1H</strong></td>
<td><strong>IEGRMD</strong></td>
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<tr>
<td>(Phe33-Ala194)</td>
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<tr>
<td>Accession # AAH20568</td>
<td>Human IgG1 (Pro100-Lys330)</td>
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**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 ED₅₀ for this effect is typically 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**
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.

**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 naive 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:**