**DESCRIPTION**

**Source**  
Mouse myeloma cell line, NS0-derived human NKG2D/CD314 protein

<table>
<thead>
<tr>
<th>N-terminal Sequence Analysis</th>
<th>C-terminus</th>
</tr>
</thead>
<tbody>
<tr>
<td>Met</td>
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</table>

**Structure / Form**  
Disulfide-linked homodimer

**Predicted Molecular Mass**  
43 kDa (monomer)

**SPECIFICATIONS**

**SDS-PAGE**  
44-63 kDa, reducing conditions

**Activity**  
Measured by its ability to bind its ligand, rhMICA/Fc Chimera in a functional ELISA.

**Endotoxin Level**  
<0.10 EU per 1 μg of the protein by the LAL method.

**Purity**  
>90%, 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 100 μg/mL in sterile 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**

NKG2D is a type II transmembrane glycoprotein having an extracellular lectin-like domain. This domain lacks the recognizable calcium-binding sites found in true C-type lectins and binds protein rather than carbohydrate ligands. Human NKG2D is expressed on CD8⁺ αβ T cells, γδ T cells, NK cells and NKT cells. In mouse systems NKG2D also occurs on macrophages. Human ligands for NKG2D include MICA, MICB, and ULBP1, 2, and 3. Expression of NKG2D ligands occurs in epithelial cells, tumor cells and under conditions of stress or infection. NKG2D exists as a disulfide-linked homodimer that delivers an activating signal upon ligand binding. Signaling requires association with an adapter protein. Alternative splicing of the NKG2D mRNA results in isoforms with different cytoplasmic domains that can associate either with DAP12 to deliver a true activating signal or with DAP10 resulting in a costimulatory signal. NKG2D has been implicated in anti-tumor surveillance and the immune response against viral infection.

**References:**