**DESCRIPTION**

Species Reactivity: Mouse

Specificity: Detects mouse NKG2D in direct ELISAs and Western blots. Does not cross-react with recombinant human NKG2D.

Source: Monoclonal Rat IgG<sub>2B</sub> Clone # 191004

Purification: Protein A or G purified from hybridoma culture supernatant

Immunogen: Mouse myeloma cell line NS0-derived recombinant mouse NKG2D

Phe94-Val232

Accession #: O54709

Endotoxin Level: <0.01 EU per 1 μg of the antibody by the LAL method.

Formulation: Lyophilized from a 0.2 μm filtered solution in PBS with Trehalose. See Certificate of Analysis for details.

**APPLICATIONS**

Please Note: Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.

**Recommended Concentration**

<table>
<thead>
<tr>
<th>Sample</th>
<th>Western Blot</th>
<th>Flow Cytometry</th>
<th>CyTOF-ready</th>
<th>Blockade of Receptor-ligand Interaction</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 μg/mL</td>
<td>Recombinant Mouse NKG2D/CD314 Fc Chimera (Catalog # 139-NK) under non-reducing conditions only</td>
<td>2.5 μg/10⁶ cells</td>
<td>NK1.1 mouse splenic NK cells</td>
<td>In a functional ELISA, 0.05-0.15 μg/mL of this antibody will block 50% of the binding of 100 ng/mL of biotinylated Recombinant Mouse Rae-1γ Fc Chimera to immobilized Recombinant Mouse NKG2D Fc Chimera (Catalog # 139-NK) coated at 4 μg/mL (100 μL/well). At 2 μg/mL, this antibody will block &gt;90% of the binding.</td>
</tr>
</tbody>
</table>

**PREPARATION AND STORAGE**

Reconstitution: Reconstitute at 0.5 mg/mL in sterile PBS.

Shipping: The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.

*Small pack size (SP) is supplied either lyophilized or as a 0.2 μm filtered solution in PBS.

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.
- 6 months, -20 to -70 °C under sterile conditions after reconstitution.

**BACKGROUND**

NKG2D is a type II transmembrane protein with an extracellular C-type lectin-like domain. It occurs as a disulfide-linked homodimer that associates with the transmembrane DAP10 (DNAX-activator protein 10) adapter protein to deliver an activating signal. This protein shares approximately 25% amino acid sequence identity with a number of other type II lectin-like proteins that are encoded by genes within the natural killer complex on mouse chromosome 6. NKG2D is expressed on NK cells, where it functions as an activating receptor to trigger cytolytic activity and cytokine secretion, and on some T cell subsets, where it acts as a co-stimulatory receptor complementing T cell receptor signaling. Several ligands have now been identified for mouse NKG2D including H60 and Rae-1α, β, γ, δ, and ε. All of these ligands are cell-surface proteins distantly related to MHC class I. However, they do not bind peptide or associate with β2-microglobulin. Ligand expression is up-regulated in many transformed cell lines and also during conditions of stress such as heat shock or viral infection. In vivo, tumor models demonstrate that NKG2D functions in anti-tumor surveillance (1-5).

**References:**