

## DESCRIPTION

|                           |  |
|---------------------------|--|
| <b>Species Reactivity</b> | Mouse  |
| <b>Specificity</b>        | Detects mouse NKG2D/CD314 in direct ELISAs and Western blots.  |
| <b>Source</b>             | Monoclonal Rat IgG <sub>2B</sub> Clone # 191004  |
| <b>Purification</b>       | Protein A or G purified from hybridoma culture supernatant   |
| <b>Immunogen</b>          | Mouse myeloma cell line NS0-derived recombinant mouse NKG2D/CD314 Phe94-Val232<br>Accession # Q4FJM0                       |
| <b>Formulation</b>        | Lyophilized from a 0.2 µm filtered solution in PBS with BSA as a carrier protein. See Certificate of Analysis for details. |

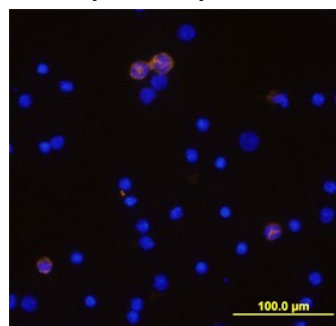
## APPLICATIONS

**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 | Sample  |
|----------------------------|---------------------------|---|
| <b>Western Blot</b>        | 1 µg/mL                   | Recombinant Mouse NKG2D/CD314 Fc Chimera (Catalog # <a href="#">139-NK</a> ) under non-reducing conditions only |
| <b>Immunocytochemistry</b> | 8-25 µg/mL                | See Below   |

## DATA

### Immunocytochemistry



**NKG2D/CD314 in Mouse Splenocytes.**  
NKG2D/CD314 was detected in immersion fixed mouse splenocytes using Rat Anti-Mouse NKG2D/CD314 Biotinylated Monoclonal Antibody (Catalog # BAM1547) at 10 µg/mL for 3 hours at room temperature. Cells were stained using the NorthernLights™ 557-conjugated Streptavidin (red; Catalog # [NL999](#)) and counterstained with DAPI (blue). View our protocol for [Fluorescent ICC Staining of Non-adherent Cells](#).

## PREPARATION AND STORAGE

|                                |  |
|--------------------------------|--|
| <b>Reconstitution</b>          | Reconstitute at 0.5 mg/mL in sterile PBS.  |
| <b>Shipping</b>                | The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.  |
| <b>Stability &amp; Storage</b> | <b>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</b> <ul style="list-style-type: none"> <li>12 months from date of receipt, -20 to -70 °C as supplied.</li> <li>1 month, 2 to 8 °C under sterile conditions after reconstitution.</li> <li>6 months, -20 to -70 °C under sterile conditions after reconstitution.</li> </ul> |

## BACKGROUND

NKG2D, also known as CD314, 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:

1. Bauer, S. *et al.* (1999) *Science* **285**:727.
2. Wu, J. *et al.* (1999) *Science* **285**:730.
3. Diefenbach, A. *et al.* (2001) *Nature* **413**:165.
4. Vivier, E. *et al.* (2002) *Curr. Opin. Immunol.* **14**:306.
5. NKG2D and its Ligands; [www.RnDSystems.com](http://www.RnDSystems.com).