

## DESCRIPTION

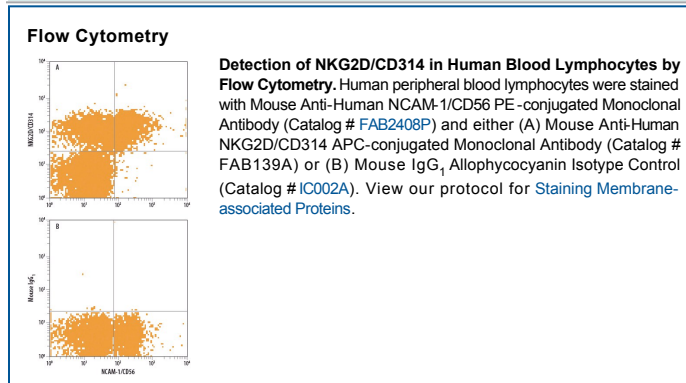
<b>Species Reactivity</b>	Human
<b>Specificity</b>	Detects human NKG2D/CD314 in Western blots.
<b>Source</b>	Monoclonal Mouse IgG <sub>1</sub> Clone # 149810
<b>Purification</b>	Protein A or G purified from hybridoma culture supernatant
<b>Immunogen</b>	BaF3 mouse pro-B cell line transfected with human NKG2D/CD314
<b>Conjugate</b>	Allophycocyanin Excitation Wavelength: 620-650 nm Emission Wavelength: 660-670 nm
<b>Formulation</b>	Supplied in a saline solution containing BSA and Sodium Azide. See Certificate of Analysis for details.  *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.

## 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>Flow Cytometry</b>	10 µL/10 <sup>6</sup> cells	See Below

## DATA



## PREPARATION AND STORAGE

**Shipping** The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.

**Stability & Storage** **Protect from light. Do not freeze.**

- 12 months from date of receipt, 2 to 8 °C as supplied.

## 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<sup>+</sup> 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:

1. Li, P. *et al.* (2001) *Nature Immunol.* **2**:443.
2. Steinle, A. *et al.* (2001) *Immunogenetics* **53**:279.
3. Cosman, D. *et al.* (2001) *Immunity* **14**:123.
4. Cerwenka, A. and L. Lanier (2001) *Immunol. Rev.* **181**:158.
5. Wu, J. *et al.* (1999) *Science* **285**:730.
6. Diefenbach, A. *et al.* (2002) *Nature Immunol.* **3**:1142.
7. Gilfillan, S. *et al.* (2002) *Nature Immunol.* **3**:1150.
8. Groh, V. *et al.* (2001) *Nature Immunol.* **2**:255.
9. Cerwenka, A. *et al.* (2001) *Proc. Natl. Acad. Sci. USA* **98**:11521.
10. Diefenbach, A. *et al.* (2001) *Nature* **413**:165.
11. NKG2D and its Ligands (2002) [www.RnDSystems.com](http://www.RnDSystems.com).