

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human NKG2D/CD314 in Western blots.
Source	Monoclonal Mouse IgG ₁ Clone # 149810
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	BaF3 mouse pro-B cell line transfected with human NKG2D/CD314
Conjugate	Alexa Fluor 405 Excitation Wavelength: 405 nm Emission Wavelength: 421 nm
Formulation	Supplied 0.2 mg/mL in a saline solution containing BSA and Sodium Azide. *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
Flow Cytometry	0.25-1 µg/10 ⁶ cells	Human whole blood CD56 ⁺ natural killer cells

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. <ul style="list-style-type: none"> 12 months from date of receipt, 2 to 8 °C as supplied.

BACKGROUND

NKG2D, also known as CD314, 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:

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