Mouse NKG2D/CD314
Alexa Fluor® 594-conjugated Antibody

Monoclonal Rat IgG_{2B} Clone # 191004

Catalog Number: FAB1547T

100 µg

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_{2B} 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
Conjugate	Alexa Fluor 594 Excitation Wavelength: 590 nm Emission Wavelength: 617 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	$NK1.1^+$ mouse splenic NK cell

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, 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.

PRODUCT SPECIFIC NOTICES

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