Recombinant Cynomolgus Monkey/Rhesus Macaque NKG2D/CD314 Fc Chimera

Catalog Number: 10960-NK

DESCRIPTION

Source

Chinese Hamster Ovary cell line, CHO-derived NKG2D/CD314 protein

MD	Human IgG_1 (Pro100-Lys330)	IEGR	Cynomologus Monkey NKG2D (Trp74-Val216) Accession # P61252.1

N-terminus C-terminus

N-terminal Sequence Analysis	Met
Structure / Form	Disulfide-linked homodimer
Predicted Molecular Mass	43 kDa

SPECIFICATIONS

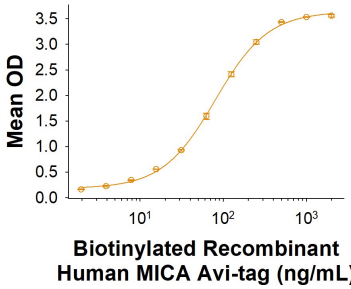
SDS-PAGE	45-65 kDa, under reducing conditions.
Activity	Measured by its binding ability in a functional ELISA. When Recombinant Cynomolgus Monkey/Rhesus Macaque NKG2D/CD314 Fc Chimera (Catalog # 10960-NK) is immobilized at 2 µg/mL (100 µL/well), Biotinylated Recombinant Human MICA Fc Chimera Avi-tag (Catalog # AVI1300) binds with an ED_{50} of 25.0-200 ng/mL.
Endotoxin Level	<0.10 EU per 1 µg of the protein by the LAL method.
Purity	>95%, by SDS-PAGE visualized with Silver Staining and quantitative densitometry by Coomassie® Blue Staining.
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 500 µg/mL in PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.
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. • 3 months, -20 to -70 °C under sterile conditions after reconstitution.

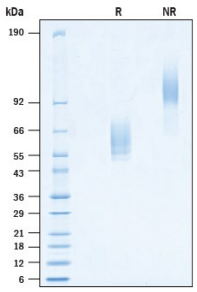
DATA

Binding Activity



Recombinant Cynomolgus Monkey/Rhesus Macaque NKG2D/CD314 Fc Chimera Protein Binding Activity. When Recombinant Cynomolgus Monkey/Rhesus Macaque NKG2D/CD314 Fc Chimera Protein (Catalog # 10960-NK) is immobilized at 2 µg/mL (100 µL/well), Biotinylated Recombinant Human MICA Fc Chimera Avi-tag (Catalog # AVI1300) binds with an ED_{50} of 25.0-200 ng/mL.

SDS-PAGE



Recombinant Cynomolgus Monkey/Rhesus Macaque NKG2D/CD314 Fc Chimera Protein SDS-PAGE. 2 µg/lane of Recombinant Cynomolgus Monkey/Rhesus Macaque NKG2D/CD314 Fc Chimera Protein (Catalog # 10960-NK) was resolved with SDS-PAGE under reducing (R) and non-reducing (NR) conditions and visualized by Coomassie® Blue staining, showing bands at 45-65 kDa and 90-130 kDa, respectively.

bio-techne®
Global bio-techne.com info@bio-techne.com techsupport@bio-techne.com TEL +1 612 379 2956
USA TEL 800 343 7475 Canada TEL 855 668 8722 China TEL +86 (21) 52380373
Europe | Middle East | Africa TEL +44 (0)1235 529449

Recombinant Cynomolgus Monkey/Rhesus Macaque NKG2D/CD314 Fc Chimera

Catalog Number: 10960-NK

BACKGROUND

Natural killer group 2, member D (NKG2D) is a type II lectin-like transmembrane glycoprotein is an activating receptor involved in both innate and adaptive immunities. Cynomologus NKG2D consists of an extracellular domain (ECD) with a C-type lectin domain, a transmembrane segment and a short cytoplasmic domain lacking signaling properties. The ECD lacks the recognizable calcium-binding sites found in true C-type lectins and binds protein rather than carbohydrate ligands (1). The ECD of cynomologus NKG2D shares 98% amino acid sequence identity with the ECD of human NKG2D. NKG2D is expressed on CD8+ alpha beta T cells, gamma δ T cells, NK cells and NKT cells and additionally occurs on macrophages in mouse (1 - 3). The NKG2D receptor consists of a homodimer and has been shown to mediate immune responses and determine the activation status of NK cells (4). In human, ligands for NKG2D include MICA, MICB, and ULBP1, 2, and 3 (3, 5). Expression of NKG2D ligands occurs in epithelial cells, tumor cells and under conditions of stress or infection (6, 7). Alternative splicing of the NKG2D 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 (7). NKG2D has been implicated in anti-tumor surveillance and the immune response against viral infection (6, 8).

References:

1. Li, P. *et al.* (2001) Nature Immunol. **2**:443.
2. Steinle, A. *et al.* (2001) Immunogenetics **53**:279.
3. Wang, J. *et al.* (2020) Biomol. **10**:301.
4. Garrity, D. *et al.* (2005) Proc. Natl. Acad. Sci. USA **102**:7641.
5. Cerwenka, A. and L. Lanier (2001) Immunol. Rev. **181**:158.
6. Diefenbach, A. *et al.* (2002) Nature Immunol. **3**:1142.
7. Gilfillan, S. *et al.* (2002) Nature Immunol. **3**:1150.
8. Cerwenka, A. *et al.* (2001) Proc. Natl. Acad. Sci. USA **98**:11521.

Global bio-techne.com info@bio-techne.com techsupport@bio-techne.com TEL +1 612 379 2956
USA TEL 800 343 7475 **Canada** TEL 855 668 8722 **China** TEL +86 (21) 52380373
Europe | Middle East | Africa TEL +44 (0)1235 529449