Recombinant Human NKp44/NCR2 His-tag

Catalog Number: 11375-NK

DESCRIPTION

Source	Human embryonic kidney cell, HEK293-derived human NKp44/NCR2 protein Gln22-Pro190, with a C-terminal 6-His tag Accession # O95944.2
N-terminal Sequence Analysis	Ser23 after deblocking
Predicted Molecular Mass	19 kDa

SPECIFICATIONS

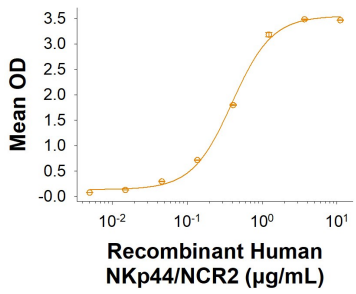
SDS-PAGE	38-42 kDa, under reducing conditions.
Activity	Measured by its binding ability in a functional ELISA. Recombinant Human NKp44/NCR2 His-tag (Catalog # 1159-SB/CF) binds Recombinant Human PDGF-DD (Catalog # 1159-SB/CF) with an ED_{50} of 0.150-1.80 µg/mL.
Endotoxin Level	<0.10 EU per 1 µg of the 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.

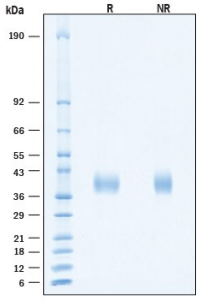
DATA

Binding Activity



Recombinant Human NKp44/NCR2 His-tag Protein Binding Activity. Recombinant Human NKp44/NCR2 His-tag Protein (Catalog # 11375-NK) binds Recombinant Human PDGF-DD (Catalog # 1159-SB/CF) with an ED_{50} of 0.150-1.80 µg/mL.

SDS-PAGE



Recombinant Human NKp44/NCR2 His-tag Protein SDS-PAGE. 2 µg/lane of Recombinant Human NKp44/NCR2 His-tag Protein (Catalog # 11375-NK) was resolved with SDS-PAGE under reducing (R) and non-reducing (NR) conditions and visualized by Coomassie® Blue staining, showing bands at 38-42 kDa.

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Recombinant Human NKp44/NCR2 His-tag

Catalog Number: 11375-NK

BACKGROUND

NKp44, along with NKp30 and NKp46, constitute a group of receptors termed "Natural Cytotoxicity Receptors" (NCR) (1). These receptors are expressed almost exclusively by NK cells and play a major role in triggering NK-mediated killing of most tumor cell lines. No rodent ortholog to NKp44 has been identified. Human NKp44, also known as NCR2, is a 44 kDa type I transmembrane glycoprotein that is characterized by the presence of one extracellular V-like immunoglobulin domain (2). It is synthesized as a 276 amino acid (aa) precursor that contains a 21 aa signal sequence, a 171 aa extracellular region, a 21 aa transmembrane segment and a 63 aa cytoplasmic tail. Alternate splicing in both the cytoplasmic tail and extracellular region generates multiple isoforms of unknown significance. The Ig-like region is unaffected. A physical association with the ITAM-bearing accessory protein, DAP12, occurs via a charged residue in the NKp44 transmembrane domain. Ligation of NKp44 with a specific antibody results in phosphorylation of DAP12 (3) and activation of target cell lysis in a redirected killing assay (4). NKp44 is absent from resting NK cells but is upregulated upon activation with IL-2. Activation-induced expression occurs in the $CD56^{dim}$ $CD16^{+}$ NK subset that accounts for more than 85% of NK cells found in peripheral blood and spleen, as well as the $CD56^{bright}$ $CD16^{-}$ NK subset that constitutes the majority of NK cells in lymph node and tonsil (5). Studies with neutralizing antibodies reveal that NKp44 is partially responsible for triggering lytic activity against several tumor cell types (2, 6). Blocking any of the individual NCRs results in partial inhibition of tumor cell lysis, but nearly complete inhibition of lysis is observed if all three receptors are blocked simultaneously (6). NKp44 has also been implicated in recognition of virus-infected cells through its capacity to bind to viral hemagglutinins (7).

References:

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4. Vitale, M. *et al.* (1998) J. Exp. Med. **187**:2065.
5. Ferlazzo, G. *et al.* (2004) J. Immunol. **172**:1455.
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7. Arnon, T. *et al.* (2001) Eur. J. Immunol. **31**:2680.

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