

## NKp46/NCR1 Protein, Rat, Recombinant (hFc)

### General Information

Synonyms:	natural cytotoxicity triggering receptor 1;Kilr1;Ly94;NCR1;Ar1
Protein Construction:	A DNA sequence encoding the rat NCR1 (Q9Z0H5) (Met1-Asn255) was expressed, fused with the Fc region of human IgG1 at the C-terminus. Predicted N terminal: Gln 17
Species:	Rat
Expression Host:	HEK293 Cells
Accession:	Q9Z0H5
Molecular Weight:	54.1 kDa (predicted); 65 and 36 kDa (reducing conditions)

### QC Testing

Biological Activity:	Activity testing is in progress. It is theoretically active, but we cannot guarantee it. If you require protein activity, we recommend choosing the eukaryotic expression version first.
Purity:	> 95 % as determined by SDS-PAGE
Endotoxin:	< 1.0 EU/μg of the protein as determined by the LAL method.
Formulation:	Lyophilized from a solution filtered through a 0.22 μm filter, containing PBS, pH 7.4. Typically, a mixture containing 5% to 8% trehalose, mannitol, and 0.01% Tween 80 is incorporated as a protective agent before lyophilization.

### Preparation and Storage

**Reconstitution:**  
A Certificate of Analysis (CoA) containing reconstitution instructions is included with the products. Please refer to the CoA for detailed information.

**Stability & Storage:**

It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

**Shipping:**

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

### Protein Background

NCR1, also known as NK-p46 and CD335, is a natural cytotoxicity receptor(NCR). NCRs are type I transmembrane proteins with 1-2 extracellular immunoglobulin domains, a transmembrane domain containing a positively charged amino acid residue, and a short cytoplasmic tail. All are expressed almost exclusively by NK cells and play a major role in triggering NK-mediated killing of most tumor cell lines. NKp46 has two extracellular Ig-like domains followed by a ~40 residue stalk region, a type I transmembrane domain, and a short cytoplasmic tail.

NKp46 has been implicated in NK cell-mediated lysis of several autologous tumor cells, pathogen-infected cell lines, and mononuclear phagocytes infected with an intracellular bacterium.

### Reference

Carbone E, et al. (2005) HLA class I, NKG2D, and natural cytotoxicity receptors regulate multiple myeloma cell recognition by natural killer cells. *Blood*. 105(1):251-8.

Sivori S, et al. (1997) p46, a Novel Natural Killer Cell-specific Surface Molecule That Mediates Cell Activation. *J Exp Med*. 186(7):1129-36.

Biassoni R, et al. (2004) Human natural killer cell receptors: insights into their molecular function and structure. *J Cell Mol Med*. 7(4):376-87.

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