NKp46/NCR1 Protein, Human (HEK293, His)

Cat. No.:	HY-P77810
Synonyms:	CD335; Ly94; NCR1; NKp46; MAR-1; NKP46FLJ99094
Species:	Human
Source:	HEK293
Accession:	O76036-6/AAH64806 (Q22-D254)
Gene ID:	9437
Molecular Weight:	Approximately 27.5 kDa

PROPERTIES

Biological Activity	Measured by its binding ability in a functional ELISA. When immobilized Human NKp46 at 0.5 μg/mL (100μL/Well) on the plate, it binds Anti-NKp46 Ab with an EC_{50} of 17.7 ng/mL.
Appearance	Lyophilized powder.
Formulation	Lyophilized from a 0.22 μm filtered solution of PBS, pH 7.4. Normally 5% trehalose is added as protectant before lyophilization.
Endotoxin Level	<1 EU/μg, determined by LAL method.
Reconsititution	It is not recommended to reconstitute to a concentration less than 100 μg/mL in ddH_2O.
Storage & Stability	Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.
Shipping	Room temperature in continental US; may vary elsewhere.

DESCRIPTION

Background

NKp46 is a ~46 kDa type 1 transmembrane glycoprotein characterized by a 30 a.a. intracellular tail, 20 a.a. transmembrane domain, and two extracellular Ig-like domains that are contacted through a 25 a.a short peptide. NKp46 is a novel triggering receptor that is involved in natural cytotoxicity[1].

NKp46 is uniquely expressed on all NK cell subsets and has been suggested as a possible target for NK cell ablation and as a pan NK cell marker. Distinct among the NCRs, NKp46 (NCR1) is evolutionary conserved between mice and humans. knock-down of NKp46 in primary human NK cells decreased recruitment of F-actin to the synapse[1].

NKp46 contributes to clearance of Streptococcus pneumoniae by interacting with infected alveolar macrophages. Targeting of NK cells using an NKp46 antibody can attenuate type 1 diabetes progression in mice. NKp46 also regulates graft-versus-host disease and allergic response. Following the initiation of an NK-target cell interaction, NKp46 clusters at the cell membrane, specifically at the immune synapse. At the immune synapse, NKp46 mediates cytoskeletal rearrangement and cellular polarization[1].

Cross-linking of NKp46 led to a strong NK cell activation resulting in induction of Ca^{2+} mobilization, cytotoxicity and

lymphokine release[2].

The natural cytotoxicity receptor (NCR) family that includes NKp30, NKp44, and NKp46 is the biggest family of activating human NK-cell receptors. NKp46 is the only NCR member that has a mouse orthologue, named Ncr1. The first ligand identified for NKp46/NCR1 receptors is the hemagglutinin (HA) protein of influenza virus[3].

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