

NKp80/KLRF1 Protein, Human, Recombinant (Active, hFc)

General Information

Synonyms:	ML;NKp80;CLEC5C
Protein Construction:	A DNA sequence encoding the Human KLRF1 (NP_057607.1) (Val66-Tyr231) was expressed with the Fc region of human IgG1 at the N-terminus.
Species:	Human
Expression Host:	HEK293 Cells
Accession:	Q9NZS2-1
Molecular Weight:	45.79 kDa (predicted); 52.5 kDa (reducing condition, due to glycosylation)

QC Testing

Biological Activity:	Measured by the ability of the immobilized protein to support the adhesion of U937 human histiocytic lymphoma cells (Routinely tested).
Purity:	≥ 90% as determined by SDS-PAGE. ≥ 90% as determined by SEC-HPLC.
Endotoxin:	< 1.0 EU/μg of the protein as determined by the LAL method.
Formulation:	Lyophilized from sterile 20 mM MES, 150 mM NaCl, 8% Glycerol, 10% trehalose, pH 6.0. Please contact us for any concerns or special requirements. Normally 5% - 8% trehalose, mannitol and 0.01% Tween 80 are added as protectants before lyophilization. Please refer to the specific buffer information in the hardcopy of datasheet or the lot-specific COA.

Preparation and Storage

Reconstitution:
Please refer to the lot-specific COA.

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

NKp80, also known as KLRF1, is an activating homodimeric C-type lectin-like receptor that is expressed on nearly all-natural killer cells and stimulates their cytotoxicity and cytokine release. NKp80 stimulates cytotoxicity upon engagement of its genetically linked ligand: myeloid-specific CTLR activation-induced C-type lectin (AICL). NKp80, but not NKp80 mutated at tyrosine 7 (NKp80/Y7F), is tyrosine phosphorylated. Accordingly, NKp80/Y7F, but not

NKp80/Y3F or NKp80/Y37F, failed to induce cytotoxicity. NKp80 phosphopeptides comprising the Hemi-ITAM-like sequence surrounding tyrosine 7 bound Lck- and Syk-family kinases; accordingly, cross-linking of NKp8, but not NKp80/Y7F, induced Syk phosphorylation. Moreover, inhibition of Syk kinase, but not ZAP-7 kinase, impaired cytotoxic responses through NKp80. Atypical residues in the Hemi-ITAM-like motif of NKp80 cause an altered stoichiometry of phosphorylation but did not substantially affect NK cytotoxicity. Altogether, these results show that NKp80 uses an atypical Hemi-ITAM and Syk kinase to trigger cellular cytotoxicity.

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