

NKp80/KLRF1 Protein, Cynomolgus, Recombinant (hFc)

General Information

Synonyms:	killer cell lectin like receptor F1;KLRF1
Protein Construction:	A DNA sequence encoding the cynomolgus KLRF1(Q8MI05) (Val66-Tyr231) was expressed with the Fc region of human IgG1 at the N-terminus. Predicted N terminal: Glu
Species:	Cynomolgus
Expression Host:	HEK293 Cells
Accession:	Q8MI05
Molecular Weight:	47.8 kDa (predicted); 59 kDa (reducing conditions)

QC Testing

Biological Activity:	Measured by the ability of the immobilized protein to support the adhesion of U937 human histiocytic lymphoma cells. When 5×10^4 cells/well are added to KLRF1-coated plates (5 $\mu\text{g}/\text{mL}$, 100 $\mu\text{L}/\text{well}$), > 40% cells will adhere after 1 hour at 37°C.
Purity:	> 90 % 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

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.

Reference

Kuttruff S. et al., 2009, Blood. 113 (2): 358-69.

Dennehy KM. et al., 2011, J Immunol. 186 (2): 657-61.

Roda-Navarro P. et al., 2000, Eur J Immunol. 30 (2): 568-76.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

This product is for Research Use Only · Not for Human or Veterinary or Therapeutic Use

Tel:781-999-4286 E_mail:info@targetmol.com Address:34 Washington Street,Wellesley Hills,MA 02481