

## 2B4/CD244 Protein, Human, Recombinant (His)

### General Information

Synonyms:	2B4;CD244 molecule, natural killer cell receptor 2B4;SLAMF4;NAIL;NKR2B4;Nmrk
Protein Construction:	Cys22-Arg221
Species:	Human
Expression Host:	HEK293 Cells
Accession:	Q9BZW8-2
Molecular Weight:	23.1 kDa (predicted); 45-70 kDa (reducing condition, due to glycosylation)

### QC Testing

Biological Activity:	Immobilized Human 2B4, His Tag at 2 µg/ml (100 µl/well) on the plate. Dose response curve for Human CD48, hFc Tag with the EC50 of 92.3 ng/ml determined by ELISA.
Purity:	> 95 % as determined by SDS-PAGE
Endotoxin:	< 1.0 EU/µg of the protein as determined by the LAL method.
Formulation:	Lyophilized from 0.22µm filtered solution in PBS (pH 7.4). Normally 8% trehalose is added as protectant before lyophilization.

### Preparation and Storage

#### Reconstitution:

Reconstitute the lyophilized protein in distilled water. The product concentration should not be less than 100 µg/ml. Before opening, centrifuge the tube to collect powder at the bottom. After adding the reconstitution buffer, avoid vortexing or pipetting for mixing.

#### 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

The CD244 antigen, also known as 2B4, is a cell surface glycoprotein implicated in the regulation of natural killer and T lymphocyte function. 2B4 is a member of the signaling lymphocyte activation molecule (SLAM)-related receptor family and is important for stimulating NK cell cytotoxicity and cytokine production, which is expressed on all NK cells, a subpopulation of T cells, monocytes and basophils. The 2B4 antigen identified on NK cells and T cells is capable of transmitting stimulatory signals and non-MHC-restricted killing. Reported as an activating receptor,

human 2B4 can effectively activate and enhance NK cell-mediated cytotoxicity, induce secretion of IFN- $\gamma$  and matrix metalloproteinases (MMPs), as well as NK cell invasiveness. As a cell surface glycoprotein of the Ig-superfamily structurally related to CD2-like molecules such as CD2, CD48, CD58, CD84, Ly-9, and SLAM, 2B4 (CD244) is expressed on all human NK cells, a subpopulation of T cells, basophils and monocytes. 2B4 activates NK cell mediated cytotoxicity, induces secretion of IFN-gamma and matrix metalloproteinases, and NK cell invasiveness. Cancer Immunotherapy Co-inhibitory Immune Checkpoint Targets Immune Checkpoint Immune Checkpoint Detection: Antibodies Immune Checkpoint Detection: ELISA Antibodies Immune Checkpoint Detection: FCM Antibodies Immune Checkpoint Detection: IP Antibodies Immune Checkpoint Proteins Immune Checkpoint Targets Immunotherapy Targeted Therapy

### Reference

- Nakajima H, et al. (2000) 2B4: an NK cell activating receptor with unique specificity and signal transduction mechanism. *Hum Immunol.* 61(1): 39-43.
- Chuang SS, et al. (2001) 2B4 (CD244)-mediated activation of cytotoxicity and IFN-gamma release in human NK cells involves distinct pathways. *J Immunol.* 167(11): 6210-6.
- McNerney ME, et al. (2005) 2B4 (CD244) is a non-MHC binding receptor with multiple functions on natural killer cells and CD8+ T cells. *Mol Immunol.* 42(4): 489-94.
- Mathew SO, et al. (2009) Functional role of human NK cell receptor 2B4 (CD244) isoforms. *Eur J Immunol.* 39(6): 1632-41.

**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