Data Sheet (Cat.No.TMPY-06294)

TargetMol

2B4/CD244 Protein, Human, Recombinant (His & Avi), Biotinylated

General Information

Synonyms:	NKR2B4;2B4;Nmrk;CD244 molecule, natural killer cell receptor 2B4;SLAMF4;NAIL
Protein Construction:	Cys22-Arg221
Species:	Human
Expression Host:	HEK293 Cells
Accession:	Q9BZW8-2
Molecular Weight:	24.9 kDa (Predicted); 48-70 kDa (Reducing conditions due to glycosylation)

QC Testing

Biological Activity:	Immobilized Biotinylated Human 2B4, His Tag at 0.5μg/ml (100μl/well) on the streptavidin precoated plate (5μg/ml). Dose response curve for Human CD48, hFc Tag with the EC50 of 29.3ng/ml determined by ELISA.
Purity:	> 95% as determined by Tris-Bis PAGE; > 95% as determined by HPLC
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

2B4 (CD244) is expressed by memory-phenotype CD8() T cells and all natural killer (NK) cells. The ligand for 2B4, CD48, is expressed on hematopoietic cells. 2B4 is conserved in humans and mice, and a number of reports have linked 2B4 with activation of lymphocytes.Engagement of 2B4 on NK cell surfaces with specific antibodies or CD48 can trigger cell mediated cytotoxicity, interferon γ secretion, phosphoinositol turnover and NK cell invasiveness.

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.
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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.

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