Data Sheet (Cat.No.TMPY-00885)

TargetMol

MICB Protein, Human, Recombinant (His & hFc)

General Information

Synonyms:	MHC class I polypeptide-related sequence B;PERB11.2
Protein Construction:	A DNA sequence encoding the extracellular domain of human MICB (NP_005922.2) (Met 1-Gly 298) was fused with the C-terminal polyhistidine-tagged Fc region of human IgG1 at the C-terminus. Predicted N terminal: Ala 23
Species:	Human
Expression Host:	HEK293 Cells
Accession:	Q29980
Molecular Weight:	59.5 kDa (predicted); 80-90 kDa (reducing condition, due to glycosylation)

QC Testing

Biological Activity:	Immobilized human His-NKG2D (78-216) at 10 μg/ml (100 μl/well) can bind human MICB-Fch, The EC50 of human MICB-Fch is 15.9-37.1 ng/ml.
Purity:	> 98 % 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

MHC class I polypeptide-related sequence B, also known as MICB, is a heavily glycosylated protein serving as a ligand for the type II receptor NKG2D. MICB shares 85% amino acid identity with MICA, a closely related protein, both of which contain three extracellular immunoglobulin-like domains, but without the capacity to bind peptide or interact with beta-2-microglobulin. acting as a stress-induced self-antigen, binding of MICB to the NKG2D

receptor activates the cytolytic response of natural killer (NK) cells, CD8+αβ T cells, and γδ T cells on which the receptor is expressed. MICA/B is minimally expressed on normal cells, but are frequently expressed on epithelial tumors and can be induced by bacterial and viral infections. MICA/B recognition thus is involved in tumor surveillance, viral infections, and autoimmune diseases.

Reference

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Borrego, F. et al., 2002, Mol. Immunol. 38: 637-660.
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