MICB
Recombinant Human MHC class I chain-related sequence B

Catalog No.	CRM128A	**Quantity:**	2 µg
	CRM128B		10 µg
	CRM128C		1.0 mg

Alternate Names: MHC class I polypeptide-related protein B, MIC-B, MICB, PERB11.2.

Description: MICB (MHC class I chain-related sequence B) is a transmembrane glycoprotein that functions as a ligand for human NKG2D type II receptor. A closely related protein, MICA, shares 85% amino acid identity with MICB. These 2 proteins are distantly related to the MHC class I proteins. MICA and MICB (MICA/B) possess three extracellular immunoglobulin-like domains, but have no capacity to bind peptide or interact with β2-microglobulin.
MICA/B are minimally expressed on normal cells, but are frequently expressed on epithelial tumors and can be induced by bacterial and viral infections. MICA/B are ligands for NKG2D, an activating receptor expressed on NK cells, NK T cells, gamma-delta T cells, and CD8+ αβ T cells. Recognition of MICA/B by NKG2D results in the activation of cytolytic activity and/or cytokine production by these effector cells. MICA/B recognition is involved in tumor surveillance, viral infections, and autoimmune diseases. The release of soluble forms of MICA/B from tumors down-regulates NKG2D surface expression on effector cells resulting in the impairment of anti-tumor immune response.
Recombinant Human MICB is a single, non-glycosylated polypeptide chain containing 326 amino acids and having a molecular mass of 37 kDa. The sequence contains the extracellular domain of the mature human MICB (amino acid residues Ala23 – Tyr312).

Physical Appearance: Sterile Filtered White lyophilized (freeze-dried) powder.

GeneID: 4277

Source: *E. coli*

Molecular Mass: 37 kDa

Formulation: Lyophilized from a concentrated (1mg/ml) solution containing no additives.

Purity: > 95.0% as determined by RP-HPLC and SDS-PAGE analyses.

Purification: The MICB is purified by proprietary chromatographic techniques.

Reconstitution: It is recommended to reconstitute the lyophilized MICB in sterile distilled water at not less than 100 µg/ml, which can be further diluted to other aqueous solutions.

Storage & Stability: Lyophilized MICB although stable at room temperature should be stored desiccated at -20°C. Reconstituted MICB may be stored at 2-4°C for 1 week and for future use at -20 - 80°C. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). **Avoid repeated freeze-thaw cycles.**

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