



Technical Data Sheet

Recombinant Human MIC-B (rHu MIC-B)

Human MIC-B

MIC-B (MHC class I chain-related gene B) is a transmembrane glycoprotein that functions as a ligand for human NKG2D. A closely related protein, MIC-A, shares 85% amino acid identity with MIC-B. These 2 proteins are distantly related to the MHC class I proteins. MIC-A and MIC-B (MIC-A/B) possess three extracellular immunoglobulin-like domains, but have no capacity to bind peptide or interact with β 2-microglobulin. The genes encoding MIC-A/B are found within the major histocompatibility complex on human chromosome 6. The MIC-B locus is polymorphic with more than 15 recognized human alleles. MIC-A/B are minimally expressed on normal cells, but are frequently expressed on epithelial tumors and can be induced by bacterial and viral infections. MIC-A/B are ligands for NKG2D, an activating receptor expressed on NK cells, NKT cells, $\gamma\delta$ T cells, and CD8+ $\alpha\beta$ T cells. Recognition of MIC-A/B by NKG2D results in the activation of cytolytic activity and/or cytokine production by these effector cells. MIC-A/B recognition is involved in tumor surveillance, viral infections, and autoimmune diseases. The release of soluble forms of MIC-A/B from tumors down-regulates NKG2D surface expression on effector cells resulting in the impairment of anti-tumor immune response.

Catalog Number:	RC712-13
Source:	<i>Escherichia coli</i>
Molecular Weight:	Approximately 37 kDa, 326 amino acid residues containing the extracellular domain of mature human MICB (amino acid residues Ala23 – Tyr312).
Quantity:	10 μ g /50 μ g /1mg
Purity:	>95% by SDS-PAGE and HPLC analyses.
Biological Activity:	Measured by its ability to bind MICB antibody in a ELISA.
Physical Appearance:	Sterile Filtered White lyophilized (freeze-dried) powder.
Formulation:	Lyophilized from a 0.2 μ m filtered concentrated solution in PBS, pH 7.0.
Endotoxin:	Less than 1EU/ μ g of rHuMIC-B as determined by LAL method.
Reconstitution:	We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Reconstitute in sterile distilled water or aqueous buffer containing 0.1% BSA to a concentration of 0.1-1.0 mg/mL. Stock solutions should be apportioned into working aliquots and stored at \leq -20°C. Further dilutions should be made in appropriate buffered solutions.
Storage:	This lyophilized preparation is stable at 2-8°C, but should be kept at -20°C for long term storage, preferably desiccated. Upon reconstitution, the preparation is stable



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for up to one week at 2-8°C. For maximal stability, apportion the reconstituted preparation into working aliquots and store at -20°C to -70°C. **Avoid repeated freeze/thaw cycles.**

Usage:

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