MICA
Recombinant Human MHC Class I Chain-related Gene A His

Catalog No.	CRM123A	**Quantity:**	10 µg
	CRM123B		50 µg
	CRM123C		1.0 mg

Alternate Names: MIC-A

Description: Recombinant Human MICA produced in *E. coli* is a single, non-glycosylated polypeptide chain containing 320 amino acids and an N-terminal His tag.

Background: MIC-A (MHC class I chain-related gene A) is a single-pass type I member protein. It is expressed on the cell surface in gastric epithelium, endothelial cells and fibroblasts and in the cytoplasm in keratinocytes and monocytes. Additionally, MIC-A can be induced by bacterial and viral infections. It shares 85 % amino acid identity with MIC-B and they are distantly related to the MHC class I proteins. Because they possess three extracellular Ig-like domains, but unlike classical MHC class I molecules. They do not form a heterodimer with beta2 microglobulin, but bind as a monomer to a KLRK1/NKG2D that is an activating receptor expressed on NK cells, NKT cells, γδ T cells, and CD8+ αβ T cells. Recognition of MICA by NKG2D results in the activation of cytolytic activity and/or cytokine production by these effector cells. MIC-A recognition plays an important role in tumor surveillance, viral infections, and autoimmune diseases.

Gene ID: 100507436

Source: *E. coli*

Molecular Weight: ~36.9 kDa

Formulation: Lyophilized from a 0.2 µm filtered concentrated solution in PBS, pH 7.4 + 8 M Urea.

Purity: >95% by SDS-PAGE and HPLC

Endotoxin Level: <1 EU/µg as determined by LAL method.

Biological Activity: Fully biologically active when compared to standard. The specific activity is determined by binding MICA antibody in ELISA.

Amino Acid Sequence: **MSYYHHHHHH DYDIPTTENL YFQGAMAPEF** EPHSLRYNLT VLSWDGSVQS GFLTEVHLDG QPFLRCDRQK CRAKPQGQWA EDVLGNKTWD RETRDLTGNG KDLRMTLAHI KDQKEGLHSL QEIRVCEIHE DNSTRSSQHF YYDGELFLSQ NLETKEWTMP QSSRAQTLAM NVRNFLKEDA MKTKTHYHAM HADCLQELRR YLKSGVVLRR TVPPMVNVTR SEASEGNITV TCRASGFYPW NITLSWRQDG VSLSHDTQQW GDVLPDGNGT YQTWVATRIC QGEEQRFTCY MEHSGNHSTH PVPSGKVLVL QSH **KLGCFGG**

Reconstitution: **Centrifuge vial prior to opening.** Add sterile distilled water or aqueous buffer to a concentration of 1.0 mg/ml. Further dilutions should be made in appropriate buffered solutions that contain 8 M Urea.

Cell Sciences®
480 Neponset Street
Bldg 12A
Canton, MA 02021

Toll Free: 888-769-1246
Phone: 781-828-0610
Fax: 781-828-0542

E-mail: info@cellsciences.com
Website: www.cellsciences.com

Storage & Stability: The lyophilized protein is stable at 2-8°C. Upon receipt, store desiccated at -20°C. After reconstitution, the preparation is stable 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 -80°C. **Avoid repeated freeze/thaw cycles.**

NOT FOR HUMAN USE. FOR RESEARCH ONLY. NOT FOR DIAGNOSTIC OR THERAPEUTIC USE.

Cell Sciences®
480 Neponset Street
Bldg 12A
Canton, MA 02021

Toll Free: 888-769-1246
Phone: 781-828-0610
Fax: 781-828-0542

E-mail: info@cellsciences.com
Website: www.cellsciences.com