9051 Mira Mesa Blvd, #910094
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# MICA Human

*MHC Class-I chain related gene A Human Recombinant*
*RCP1365*

## Product Overview

| | |
|---|---|
| Name | MICA Human |
| **Description** | |
| MHC Class-I chain related gene A Human Recombinant | |
| Accession (Primary) | Q29983 |
| **Synonyms** | |
| MHC class I polypeptide-related sequence A, MIC-A, MICA, PERB11.1, HLA-B, AS, HLAB, HLAC, SPDA1, HLA-B73, HLA-B-7301. | |
| **Introduction** | |
| MICA (MHC class I chain-related gene A) is a transmembrane glycoprotein that functions as a ligand for human NKG2D. A closely related protein, MICB, shares 85% amino acid identity with MICA. These proteins are distantly related to the MHC class I proteins. They possess three extracellular Ig-like domains, but they have no capacity to bind peptide or interact with ?2-microglobulin. The genes encoding these proteins are found within the Major Histocompatibility Complex on human chromosome 6. The MICA locus is highly polymorphic with more than 50 recognized human alleles. MICA is absent from most cells but is frequently expressed in epithelial tumors and can be induced by bacterial and viral infections. MICA is a ligand for human NKG2D, an activating receptor expressed on NK cells, NKT cells, gamma delta T cells, and CD8+ beta T cells. Recognition of MICA by NKG2D results in the activation of cytolytic activity and/or cytokine production by these effector cells. MICA recognition is involved in tumor surveillance, viral infections, and autoimmune diseases. | |
| **Source** | |
| Escherichia Coli. | |
| **Physical Appearance** | |
| Sterile Filtered White lyophilized (freeze-dried) powder. | |
| **Formulation** | |
| Lyophilized from a concentrated (1mg/ml) solution containing no additives. | |
| **Stability** | |
| Lyophilized MICA although stable at room temperature for 3 weeks, should be stored desiccated below -18°C. Upon reconstitution MICA should be stored at 4°C between 2-7 days and for future use below -18°C. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Please prevent freeze-thaw cycles. | |

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**Purity**

Greater than 95.0% as determined by: (a) Analysis by RP-HPLC. (b) Analysis by SDS-PAGE.

**Amino acid sequence**

EPHSLRYNLTVLSWDGSVQSGFLAEVHLDGQPFLRYDRQKCRAKPQ
GQWAEDVLGNKTWDRETRDLTGNGKDLRMTLAHIKDQKEGLHSLQE
IRVCEIHEDNSTRSSQHFYYDGELFLSQNLETEEWTVPQSSRAQTLAM
NVRNFLKEDAMKTKTHYHAMHADCLQELRRYLESGVVLRRTVPPMVN
VTRSEASEGNITVTCRASSFYPRNIILTWRQDGVSLSHDTQQWGDVLP
DGNGTYQTWVATRICRGEEQRFTCYMEHSGNHSTHPVPSGKVLVLQSH.

**Biological Activity**

Measured by its ability to bind MICA antibody in ELISA.

**Solubility**

It is recommended to reconstitute the lyophilized MICA in sterile 18MΩ-cm H2O not less than 100 µg/ml, which can then be further diluted to other aqueous solutions.

**References**

1. Title :Therapy-induced antibodies to MHC class I chain-related protein A antagonize immune suppression and stimulate antitumor cytotoxicity. Publication :PNAS June 13, 2006 vol. 103 no. 24 9191 Link : MICA prospec publication 2. Title :MHC class I chain-related protein A antibodies and shedding are associated with the progression of multiple myeloma. Publication :Published online before print January 17, 2008, doi: 10.1073/pnas.0711293105 PNAS January 29, 2008 vol. 105 no. 4 1285-1290 Link : MHC Class-I chain prospec publication

**Precautions**

MICA Human is for research use only and not for use in diagnostic or therapeutic procedures.

## Target Information: ( Q29983 )