

Product Data Sheet

Product Name: MICA Human
 Cat. No.: GP23923
 Batch No.: 1

Product Data

Purity >98% Source
 Physical Appearance solid Shipping Condition

Synonyms MHC class I polypeptide-related sequence A; MIC-A; MICA; PERB11.1; HLA-B; AS; HLAB; HLAC; SPDA1; HLA-B73; HLA-B-7301.

Amino Acid Sequence EPHSLRYNLTVLSWDGSGFLAEVHLDGQPFLRYDRQKCRAPQGQWAEDVLGNKTWDRETRDLTGNGKDLRMTLAHIKDQKEGLHSLQEIRVCE

Solubility It is recommended to reconstitute the lyophilized MICA in sterile 18MΩ-cm H₂O not less than 100μg/ml, which can then be further
 Formulation Lyophilized from a concentrated (1mg/ml) solution containing no additives.

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, gammadelta 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.

Biological Activity

Measured by its ability to bind MICA antibody in ELISA.

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.

Background

MICA Human Recombinant produced in E.Coli is a single, non-glycosylated polypeptide chain containing 320 amino acids and having a molecular mass of 36kDa. The sequence contains the full length extracellular domain of the mature human MICA (amino acid residues Ala23 - Gln308) The MICA is purified by proprietary chromatographic techniques.

Caution: Product has not been fully validated for medical applications. For research use only.

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