

32-4208: Recombinant Human MHC class I chain-related gene A

Alternative Name : MHC class I polypeptide-related sequence A, MIC-A, MICA, PERB11.1, HLA-B*AS, HLAB, HLAC, SPDA1, HLA-B*73, HLA-B*7301.

Description

Source : Escherichia Coli. 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. 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.

Product Info

Amount : 10 µg
Purification : Greater than 95.0% as determined by:(a) Analysis by RP-HPLC.(b) Analysis by SDS-PAGE.
Content : Lyophilized from a concentrated (1mg/ml) solution containing no additives.
Storage condition : 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.
Amino Acid : EPHSLRYNLTVLSWDGSGVQSGFLAEVHLDGQPFLRYDRQKCRAPQGQWAEDVLGNKTWDRETRDLTGNGKDLRMTLAHIKDQKEGLHSLQEIRVCEIHEDNSTRSSQHFYYDGELFLSQNLETEEWTPQSSRAQTLAMNVRNFKEDAMKTKTHYHAMHADCLQLRRYLESGVLRRTVPPMVNTRSEASEGNITVTCRASSFYPRNIILTWRQDGVSLSHDTQQWGDVLPDNGTYQTWVATRICRGEEQRFTCYMEHSGNHSTHPVPSGKVLVLQSH.

Application Note

It is recommended to reconstitute the lyophilized MICA in sterile 18MΩ·cm H₂O not less than 100µg/ml, which can then be further diluted to other aqueous solutions. Measured by its ability to bind MICA antibody in ELISA.