

Product: MHC Class-I chain related gene A (MICA), human, recombinant
Catalog #: 12-4415
Amount: 5 µg

DESCRIPTION: Recombinant human MICA (rHuMICA)
rHuMICA 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 β 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, γ δ T cells, and CD8+ α β 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.
rHuMICA 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 extracellular domain of the mature human MICA (amino acid residues Ala23 – Gln308)

SOURCE: *Escherichia coli* expression system

PURITY: > 95%, as determined by:
(a) Analysis by RP-HPLC.
(b) Anion-exchange FPLC
(c) Analysis by reducing and non-reducing SDS-PAGE Silver Stained gel

ENDOTOXIN: Less than 0.1 ng/µg (IEU/µg) of rHuMICA

DIMERS & AGGREGATES: Less than 1% as determined by silver stained SDS-PAGE gel analysis

PROTEIN CONTENT: Protein quantitation was carried out by 2 independent methods:
- UV spectroscopy at 280 nm
- Analysis by RP-HPLC, rHuMICA is fully biologically active when compared to standards.

FORM: Purified, 0.5X PBS, pH 7.4, containing 0.1% BSA

STORAGE: -20°C (aliquot), avoid freezing and thawing cycles

BIOLOGICAL ACTIVITY: rHuMICA is fully biologically active when compared to standards.
Measured by its ability to bind MICA antibody in ELISA.

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