Recombinant Human MICA protein

Cat. No. MICA-1280H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant Human MICA protein was expressed in Escherichia coli.
Species	Human
Source	E.coli
ProteinLength	320
Description	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.
Form	Lyophilized from a 0.2μm filtered concentrated solution in PBS, pH 7.4, and 8 M Urea.

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Bio-activity	Fully biologically active when compared to standard. The specific activity is determined by binding MICA antibody in ELISA.
Molecular Mass	Approximately 36.9 kDa, a single non-glycosylated polypeptide chain containing 320 amino acids.
AA Sequence	MSYYHHHHHHDYDIPTTENLYFQGAMDPEFEPHSLRYNLTVLSWDGSVQSGFLAEV HLDGQPFLRYDRQKCRAKPQGQWAEDVLGNKTWDRETRDLTGNGKDLRMTLAHIK DQKEGLHSLQEIRVCEIHEDNSTRSSQHFYYDGELFLSQNLETEEWTVPQSSRAQT LAMNVRNFLKEDAMKTKTHYHAMHADCLQELRRYLESGVVLRRTVPPMVNVTRSE ASEGNITVTCRASSFYPRNIILTWRQDGVSLSHDTQQWGDVLPDGNGTYQTWVATR ICRGEEQRFTCYMEHSGNHSTHPVPSGKVLVLQSHKLGCFGG
Endotoxin	Less than 1 EU/μg of rHuMIC-A, His as determined by LAL method.
Purity	>95% by SDS-PAGE and HPLC analysis.
Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. 12 months from date of receipt, -20 to -70 centigrade as supplied. 1 month, 2 to 8 centigrade under sterile conditions after reconstitution. 3 months, -20 to -70 centigrade under sterile conditions after reconstitution.
Reconstitution	We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Reconstitute in sterile distilled water to a concentration of 1.0 mg/mL. Stock solutions should be apportioned into working aliquots and stored at ≤-20 centigrade. Further dilutions should be made in appropriate buffered solutions, which contain 8 M Urea.

GENE INFORMATION

Gene Name	MICA

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Official Symbol	MICA
Synonyms	MICA; MHC class I polypeptide-related sequence A; PERB11.1; HLA class I antigen; stress inducible class I homolog; MHC class I chain-related protein A; MIC-A; FLJ36918; FLJ60820; MGC21250; MGC111087;
Gene ID	100507436
mRNA Refseq	NM_000247
Protein Refseq	NP_000238
MIM	600169
UniProt ID	Q29983

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