

Active Recombinant Human MICA protein, Fc/Avi-tagged, Biotinylated

Cat. No. MICA-051H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Biotinylated Recombinant Human MICA(Ala23-Gln308) protein, fused to Fc/Avi tag at the C-terminus, was expressed in CHO cells .
Species	Human
Source	CHO
ProteinLength	Ala23-Gln308
Description	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 beta 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 δ T cells, and CD8+ alpha 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.

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Predicted N Terminal	Ala23
Form	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose.
Bio-activity	Measured by its binding ability in a functional ELISA. When Recombinant Human NKG2D Fc Chimera is immobilized at 1 µg/mL (100 µ/well), the concentration of Biotinylated Recombinant Human MICA Fc Chimera Avi-tag that produces 50% of the optimal binding response is found to be approximately 7.5-45 ng/mL.
Molecular Mass	85-100 kDa, under reducing conditions
Endotoxin	<0.10 EU per 1 µg of the protein by the LAL method.
Purity	>95%, by SDS-PAGE visualized with Silver Staining and quantitative densitometry by Coomassie® Blue Staining.
Applications	Bioactivity
Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. 12 months from date of receipt, -20 to -70 °C as supplied. 1 month, 2 to 8 °C under sterile conditions after reconstitution. 3 months, -20 to -70 °C under sterile conditions after reconstitution.
Reconstitution	Reconstitute at 500 µg/mL in PBS.
Conjugation	Biotin

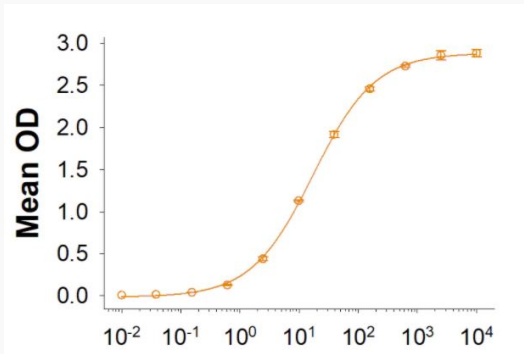
GENE INFORMATION

Gene Name MICA MHC class I polypeptide-related sequence A [Homo sapiens]

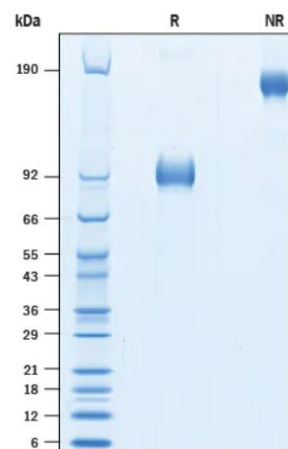
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Official Symbol	MICA																
Synonyms	MICA; MHC class I polypeptide-related sequence A; PERB11.1; HLA class I antigen; stress inducible class I homolog; MHC class I chain-related protein A; MIC-A; FLJ36918; FLJ60820; MGC21250; MGC111087;																
Gene ID	100507436																
mRNA Refseq	NM_000247																
Protein Refseq	NP_000238																
MIM	600169																
UniProt ID	Q29983																
Binding Activity	 <table border="1"> <caption>Approximate data points from the Binding Activity graph</caption> <thead> <tr> <th>Concentration (X-axis)</th> <th>Mean OD (Y-axis)</th> </tr> </thead> <tbody> <tr><td>10⁻²</td><td>0.0</td></tr> <tr><td>10⁻¹</td><td>0.0</td></tr> <tr><td>10⁰</td><td>0.1</td></tr> <tr><td>10¹</td><td>1.1</td></tr> <tr><td>10²</td><td>2.4</td></tr> <tr><td>10³</td><td>2.7</td></tr> <tr><td>10⁴</td><td>2.8</td></tr> </tbody> </table>	Concentration (X-axis)	Mean OD (Y-axis)	10 ⁻²	0.0	10 ⁻¹	0.0	10 ⁰	0.1	10 ¹	1.1	10 ²	2.4	10 ³	2.7	10 ⁴	2.8
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SDS-PAGE



2 µg/lane Protein was resolved with SDS-PAGE under reducing (R) and non-reducing (NR) conditions and visualized by Coomassie® Blue staining.

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