

## Active Recombinant Human MICA protein, His-GST-tagged

**Cat. No.** MICA-1778H    **Lot. No.** (See product label)

### SPECIFICATION

|                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
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| <b>Product Overview</b> | Active Recombinant Human MICA protein(Q29983)(24-307 aa), fused with N-terminal His tag and GST tag, was expressed in E.coli.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Species</b>          | Human                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>Source</b>           | E.coli                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>ProteinLength</b>    | 24-307 aa                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Form</b>             | 20mM Tris, 150mM NaCl, pH8.0, containing 1mM EDTA, 1mM DTT, 0.01% SKL, 5% Trehalose and Proclin300.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>Bio-activity</b>     | MHC Class I Polypeptide Related Sequence A (MICA) is a stress-induced cell surface protein. It belongs to the MHC class I-like molecules but has distinct features. MICA is highly expressed on cells under stress, such as those with DNA damage or infected cells. Structurally, it has a domain structure that allows for interactions with other molecules. MICA can function as a ligand and binds to Killer Cell Lectin Like Receptor Subfamily D, Member 1 (KLRD1, also known as NKG2D) on the surface of natural killer (NK) cells and some T cells. This binding activates immune cells and enables them to participate in the body's immune surveillance and defense responses. Thus a functional ELISA assay was conducted to detect the interaction of recombinant human MICA and recombinant human KLRD1. Briefly, MICA was diluted serially in PBS with 0.01% BSA (pH 7.4). Duplicate samples of 100 µl were then transferred to KLRD1-coated microtiter wells and incubated for 1h at 37°C. Wells were washed with |

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PBST and incubated for 1h with anti-MICA pAb, then aspirated and washed 3 times. After incubation with HRP labelled secondary antibody for 1h at 37°C, wells were aspirated and washed 5 times. With the addition of substrate solution, wells were incubated 15-25 minutes at 37°C. Finally, add 50 µ stop solution to the wells and read at 450/630nm immediately. The binding activity of recombinant human MICA and recombinant human KLRD1 was shown, the EC50 for this effect is 0.582ug/mL.

|                       |                                                                                                                                          |
|-----------------------|------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Molecular Mass</b> | 62.7kDa                                                                                                                                  |
| <b>Endotoxin</b>      | <1.0EU per 1µg (determined by the LAL method).                                                                                           |
| <b>Purity</b>         | > 90%                                                                                                                                    |
| <b>Storage</b>        | Avoid repeated freeze/thaw cycles. Store at 2-8°C for one month. Store at -20°C for 12 months. Aliquot and store at -80°C for 12 months. |
| <b>Reconstitution</b> | Reconstitute in 10mM PBS (pH7.4) to a concentration of 0.1-1.0 mg/mL. Do not vortex.                                                     |

## GENE INFORMATION

|                        |                                                                                                                                                                                                         |
|------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Gene Name</b>       | MICA MHC class I polypeptide-related sequence A [ Homo sapiens ]                                                                                                                                        |
| <b>Official Symbol</b> | MICA                                                                                                                                                                                                    |
| <b>Synonyms</b>        | 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; |
| <b>Gene ID</b>         | 100507436                                                                                                                                                                                               |

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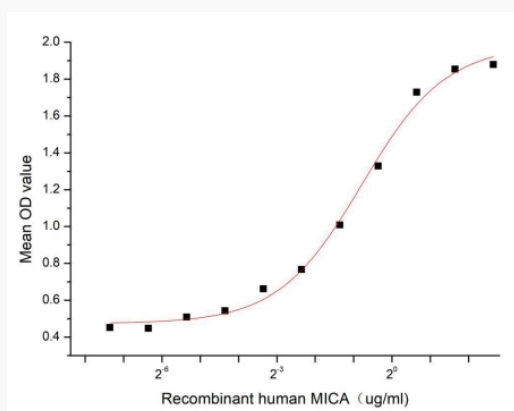
mRNA Refseq [NM\\_000247](#)

Protein Refseq [NP\\_000238](#)

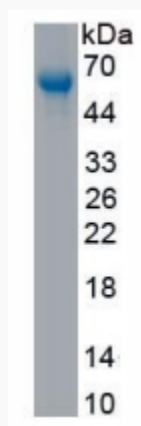
MIM [600169](#)

UniProt ID [Q29983](#)

#### Activity



#### SDS-PAGE



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