

## DESCRIPTION

|                                                                                                                                                                                                         |                                                                                                        |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------|
| <b>Species Reactivity</b>                                                                                                                                                                               | Human                                                                                                  |
| <b>Specificity</b>                                                                                                                                                                                      | Detects human MICA in direct ELISAs and Western blots.                                                 |
| <b>Source</b>                                                                                                                                                                                           | Polyclonal Goat IgG                                                                                    |
| <b>Purification</b>                                                                                                                                                                                     | Antigen Affinity-purified                                                                              |
| <b>Immunogen</b>                                                                                                                                                                                        | Mouse myeloma cell line NS0-derived recombinant human MICA<br>Ala23-Gln308<br>Accession # NP_001170990 |
| <b>Conjugate</b>                                                                                                                                                                                        | Alexa Fluor 700<br>Excitation Wavelength: 675-700 nm<br>Emission Wavelength: 723 nm                    |
| <b>Formulation</b>                                                                                                                                                                                      | Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide                                           |
| *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions. |                                                                                                        |

## APPLICATIONS

**Please Note:** Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.

|                                                |                                                                        |
|------------------------------------------------|------------------------------------------------------------------------|
| <b>Western Blot</b>                            | Optimal dilution of this antibody should be experimentally determined. |
| <b>Blockade of Receptor-ligand Interaction</b> | Optimal dilution of this antibody should be experimentally determined. |
| <b>Immunohistochemistry</b>                    | Optimal dilution of this antibody should be experimentally determined. |

## PREPARATION AND STORAGE

|                                |                                                                                                                   |
|--------------------------------|-------------------------------------------------------------------------------------------------------------------|
| <b>Shipping</b>                | The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below. |
| <b>Stability &amp; Storage</b> | Protect from light. Do not freeze. 12 months from date of receipt, 2 to 8 °C as supplied                          |

## BACKGROUND

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,  $\gamma\delta$  T cells, and CD8<sup>+</sup>  $\alpha\beta$  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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