

**MICA Antibody (Center) Blocking Peptide**  
**Synthetic peptide**  
**Catalog # BP8626c****Specification**

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**MICA Antibody (Center) Blocking Peptide - Product Information**Primary Accession [Q29983](#)**MICA Antibody (Center) Blocking Peptide - Additional Information****Gene ID** 100507436**Other Names**

MHC class I polypeptide-related sequence A, MIC-A, MICA {ECO:0000312|EMBL:CAI419071}

**Target/Specificity**

The synthetic peptide sequence used to generate the antibody [AP8626c](/products/AP8626c) was selected from the Center region of human MICA. A 10 to 100 fold molar excess to antibody is recommended. Precise conditions should be optimized for a particular assay.

**Format**

Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

**Storage**

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

**Precautions**

This product is for research use only. Not for use in diagnostic or therapeutic procedures.

**MICA Antibody (Center) Blocking Peptide - Protein Information****Name** MICA {ECO:0000312|EMBL:CAI41907.1}**Function**

Widely expressed membrane-bound protein which acts as a ligand to stimulate an activating receptor KLRK1/NKG2D, expressed on the surface of essentially all human natural killer (NK), gammadelta T and CD8 alphabeta T-cells (PubMed:[11491531](http://www.uniprot.org/citations/11491531), PubMed:[11777960](http://www.uniprot.org/citations/11777960)). Up-regulated in stressed conditions, such as viral and bacterial infections or DNA damage response, serves as signal of cellular stress, and engagement of KLRK1/NKG2D by MICA triggers NK-cells resulting in a range of immune effector functions, such as cytotoxicity and cytokine production (PubMed:[10426993](http://www.uniprot.org/citations/10426993)).

**Cellular Location**

Cell membrane; Single-pass type I membrane protein. Cytoplasm Note=Expressed on the cell

surface in gastric epithelium, endothelial cells and fibroblasts and in the cytoplasm in keratinocytes and monocytes. Infection with human adenovirus 5 suppresses cell surface expression due to the adenoviral E3-19K protein which causes retention in the endoplasmic reticulum.

#### **Tissue Location**

Widely expressed with the exception of the central nervous system where it is absent. Expressed predominantly in gastric epithelium and also in monocytes, keratinocytes, endothelial cells, fibroblasts and in the outer layer of Hassal's corpuscles within the medulla of normal thymus. In skin, expressed mainly in the keratin layers, basal cells, ducts and follicles. Also expressed in many, but not all, epithelial tumors of lung, breast, kidney, ovary, prostate and colon. In thymomas, overexpressed in cortical and medullar epithelial cells. Tumors expressing MICA display increased levels of gamma delta T-cells.

#### **MICA Antibody (Center) Blocking Peptide - Protocols**

Provided below are standard protocols that you may find useful for product applications.

- [Blocking Peptides](#)

#### **MICA Antibody (Center) Blocking Peptide - Images**

#### **MICA Antibody (Center) Blocking Peptide - Background**

MICA is the highly polymorphic MHC (HLA) class I chain-related gene A. The protein product is expressed on the cell surface, although unlike canonical class I molecules does not seem to associate with beta-2-microglobulin. It is thought that MICA functions as a stress-induced antigen that is broadly recognized by intestinal epithelial gamma delta T cells.

#### **MICA Antibody (Center) Blocking Peptide - References**

Bahram,S., et.al., Proc. Natl. Acad. Sci. U.S.A. 91 (14), 6259-6263 (1994) Klein,J.et.al., Proc. Natl. Acad. Sci. U.S.A. 91 (14), 6251-6252 (1994) Parham,P., et.al., J. Immunol. 142 (11), 3937-3950 (1989)