Overview

Product name: Anti-MICA antibody
Description: Rabbit polyclonal to MICA
Host species: Rabbit
Tested applications:
- Suitable for: WB, IHC-P, Flow Cyt, ICC/IF
Species reactivity:
- Reacts with: Human
Immunogen:
- KLH conjugated synthetic peptide selected from the center region of Human MICA (NP_000238.1).
Positive control:
- WB: MDA-MB231 cell line lysates
- IHC-P: human hepatocarcinoma
- FC: SK-Br-3 cells

Properties

Form: Liquid
Storage instructions:
- Shipped at 4°C. Upon delivery aliquot and store at -20°C or -80°C. Avoid repeated freeze / thaw cycles.
Storage buffer:
- Preservative: 0.09% Sodium azide
- Constituent: PBS
Purity: Immunogen affinity purified
Purification notes:
- ab93170 is purified through a protein A column, followed by peptide affinity purification.
Clonality: Polyclonal
Isotype: IgG

Applications

Our Abpromise guarantee covers the use of ab93170 in the following tested applications.
The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

<table>
<thead>
<tr>
<th>Application</th>
<th>Abreviews</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>WB</td>
<td>1/100 - 1/500. Predicted molecular weight: 43 kDa.</td>
<td></td>
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<tr>
<td>IHC-P</td>
<td>1/100 - 1/500. Perform heat mediated/ sodium citrate pH6 for antigen retrieval</td>
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### Function
Seems to have no role in antigen presentation. Acts as a stress-induced self-antigen that is recognized by gamma delta T-cells. Ligand for the KLRK1/NKG2D receptor. Binding to KLRK1 leads to cell lysis.

### Tissue specificity
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 thyromas, overexpressed in cortical and medullary epithelial cells. Tumors expressing MICA display increased levels of gamma delta T-cells.

### Involvement in disease
Note=Anti-MICA antibodies and ligand shedding are involved in the progression of monoclonal gammopathy of undetermined significance (MGUS) to multiple myeloma.

Genetic variations in MICA may be a cause of susceptibility to psoriasis type 1 (PSORS1) [MIM:177900]. Psoriasis is a common, chronic inflammatory disease of the skin with multifactorial etiology. It is characterized by red, scaly plaques usually found on the scalp, elbows and knees. These lesions are caused by abnormal keratinocyte proliferation and infiltration of inflammatory cells into the dermis and epidermis.

Genetic variation in MICA is a cause of susceptibility to psoriatic arthritis (PSORAS) [MIM:607507]. PSORAS is an inflammatory, seronegative arthritis associated with psoriasis. It is a heterogeneous disorder ranging from a mild, non-destructive disease to a severe, progressive, erosive arthropathy. Five types of psoriatic arthritis have been defined: asymmetrical oligoarthritis characterized by primary involvement of the small joints of the fingers or toes; asymmetrical arthritis which involves the joints of the extremities; symmetrical polyarthritis characterized by a rheumatoid-like pattern that can involve hands, wrists, ankles, and feet; arthritis mutilans, which is a rare but deforming and destructive condition; arthritis of the sacroiliac joints and spine (psoriatic spondylitis).

### Sequence similarities
Belongs to the MHC class I family. MIC subfamily. Contains 1 Ig-like C1-type (immunglobulin-like) domain.

### Post-translational modifications
N-glycosylated. Glycosylation is not essential for interaction with KLRK1/NKG2D but enhances complex formation.

Proteolytically cleaved and released from the cell surface of tumor cells which impairs KLRK1/NKG2D expression and T-cell activation.

### Cellular localization
Cell membrane. Cytoplasm. 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.

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<tr>
<td>Flow Cyt</td>
<td>1/10 - 1/50.</td>
<td><em>ab171870</em> - Rabbit polyclonal IgG, is suitable for use as an isotype control with this antibody.</td>
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<tr>
<td>ICC/IF</td>
<td>Use at an assay dependent concentration.</td>
<td></td>
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</table>
ab93170, at a 1/10 dilution, staining MICA in SK-Br-3 cells by flow cytometric analysis (bottom histogram) compared to a negative control cell (top histogram). FITC-conjugated goat-anti-rabbit secondary antibody used for the analysis.

Anti-MICA antibody (ab93170) at 1/100 dilution + MDA-MB231 cell line lysates at 35 µg

**Predicted band size:** 43 kDa

ab93170, at a 1/50 dilution, staining MICA in formalin-fixed and paraffin-embedded Human hepatocarcinoma peroxidase-conjugated to FITC-conjugated goat-anti-rabbit secondary antibody, followed by DAB staining.
ICC/IF image of ab93170 stained HeLa cells. The cells were 4% formaldehyde (10 min) and then incubated in 1%BSA / 10% normal goat serum / 0.3M glycine in 0.1% PBS-Tween for 1h to permeabilise the cells and block non-specific protein-protein interactions. The cells were then incubated with the antibody (ab93170, 5µg/ml) overnight at +4°C. The secondary antibody (green) was ab96899 Dylight 488 goat anti-rabbit IgG (H+L) used at a 1/250 dilution for 1h. Alexa Fluor® 594 WGA was used to label plasma membranes (red) at a 1/200 dilution for 1h. DAPI was used to stain the cell nuclei (blue) at a concentration of 1.43µM.

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