# abcam

## Product datasheet

# Recombinant Human MICA protein (Tagged) (Biotin) ab271613

## 1 Image

**Description** 

Product name Recombinant Human MICA protein (Tagged) (Biotin)

**Purity** >= 90 % SDS-PAGE.

Expression system HEK 293 cells

Accession Q96QC4

Protein length Protein fragment

Animal free No

Nature Recombinant

**Species** Human

Sequence AEPHSLRY NLTVLSWDGS VQSGFLAEVH LDGQPFLRYD

RQKCRAKPQG QWAEDVLGNK TWDRETRDLT
GNGKDLRMTL AHIKDQKEGL HSLQEIRVCE
IHEDNSTRSS QHFYYDGELF LSQNLETEEW
TVPQSSRAQT LAMNVRNFLK EDAMKTKTHY
HAMHADCLQE LRRYLESGVV LRRTVPPMVN

VTRSEASEGN ITVTCRASSF YPRNIILTWR QDGVSLSHDT

QQWGDVLPDG NGTYQTWVAT RICRGEEQRF TCYMEHSGNH STHPVPSGKV LVLQSHWQ

Predicted molecular weight 62 kDa

Amino acids 23 to 308

Tags Avi tag C-Terminus , Fc tag C-Terminus

Additional sequence information Fc portion of human lgG1.

**Conjugation** Biotin

**Specifications** 

Our Abpromise quarantee covers the use of ab271613 in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Applications SDS-PAGE

Form Liquid

1

#### **Additional notes**

Enzymatically biotin-labeled using Avi-tag™ technology

#### **Preparation and Storage**

#### Stability and Storage

Shipped on Dry Ice. Store at -80°C. Avoid freeze / thaw cycle. Store In the Dark.

pH: 7.40

Constituents: 0.13% Sodium phosphate, 0.64% Sodium chloride, 0.02% Potassium chloride,

20% Glycerol (glycerin, glycerine)

#### **General Info**

#### **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 thyomas, overexpressed in cortical and medullar 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 rheumatoidlike 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 (immunoglobulin-like) domain.

# Post-translational modifications

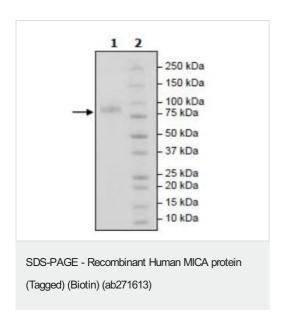
N-glycosylated. Glycosylation is not essential for interaction with KLRK1/NKG2D but enhances complex formation.

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.

### **Images**



SDS-PAGE analysis of 4 µg ab271613.

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