

Rabbit Anti-MICA antibody

SL0832R

Product Name MICA

Chinese Name MHC I 类链相关蛋白 A/组织相容性复合物 MHC Ia 抗体

Alias

MHC I a; MHC class I polypeptide-related sequence A; MHCA; MHC class-I chain related protein A; HLA class I antigen; FLJ36918; FLJ60820; MGC111087; MGC21250; MHC class I chain related gene A protein; MHC class I chain related protein A; MHC class I chain related protein A HLA B HLA C; MHC class I polypeptide related sequence A; MHC class I related protein; MIC A; PERB11.1; Stress inducible class I homolog; MICA_HUMAN; MIC A; MIC-A; micA.

Research Area

Tumour Cell biology immunology Binding protein

Immunogen Species

Rabbit

Clonality

Polyclonal

React Species

Human, Mouse,

Applications

WB=1:500-2000,IHC-P=1:100-500,IHC-F=1:100-500,IF=1:100-500,Flow-Cyt=1µg/Test
(Paraffin sections need antigen repair)
not yet tested in other applications.
optimal dilutions/concentrations should be determined by the end user.

Theoretical molecular weight

43kDa

Cellular localization

cytoplasmic The cell membrane

Form

Liquid

Concentration 1mg/ml

immunogen

KLH conjugated synthetic peptide derived from human MICA: 101-200/383

Lsotype

IgG

Purification

affinity purified by Protein A

Buffer Solution

1M TBS(pH7.4) with 1% BSA, 3% Proclin300 and 50% Glycerol.

Storage

Shipped at 4°C. Store at -20 °C for one year. Avoid repeated freeze/thaw cycles.

Attention

This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.

PubMed

[PubMed](#)

The MHC class I chain-related (MIC) proteins are related to the Major histocompatibility complex (MHC) class I proteins which are ubiquitously expressed and mediate the recognition of intracellular antigens by cytotoxic T cells. The MHC class I chain-related (MIC) proteins are recognized by NKG2D, a receptor on NK and T cells, and promote anti-tumor activity. MICA, a member of the MIC family, is widely expressed on many tumors, and it is the MICA/NKG2D interaction that is thought to stimulate the anti-tumor reactivity by T lymphocytes. MICA is present in virtually every tissue except the nervous system, suggesting that MIC protein expression may only be one component of the anti-tumor activity of the immune system.

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.

Subcellular Location:

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.

Product Detail

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 thymomas, overexpressed in cortical and medullar epithelial cells. Tumors expressing MICA display increased levels of gamma delta T cells.

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.

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).

Similarity:

Belongs to the MHC class I family. MIC subfamily.

Contains 1 Ig-like C1-type (immunoglobulin-like) domain.

SWISS:

Q29983

Gene ID:

100507436

Database links:

[Entrez Gene: 100507436](#) Human

[Entrez Gene: 4276](#) Human

[Omim: 600169](#) Human

[SwissProt: Q29983](#) Human

[Unigene: 130838](#) Human

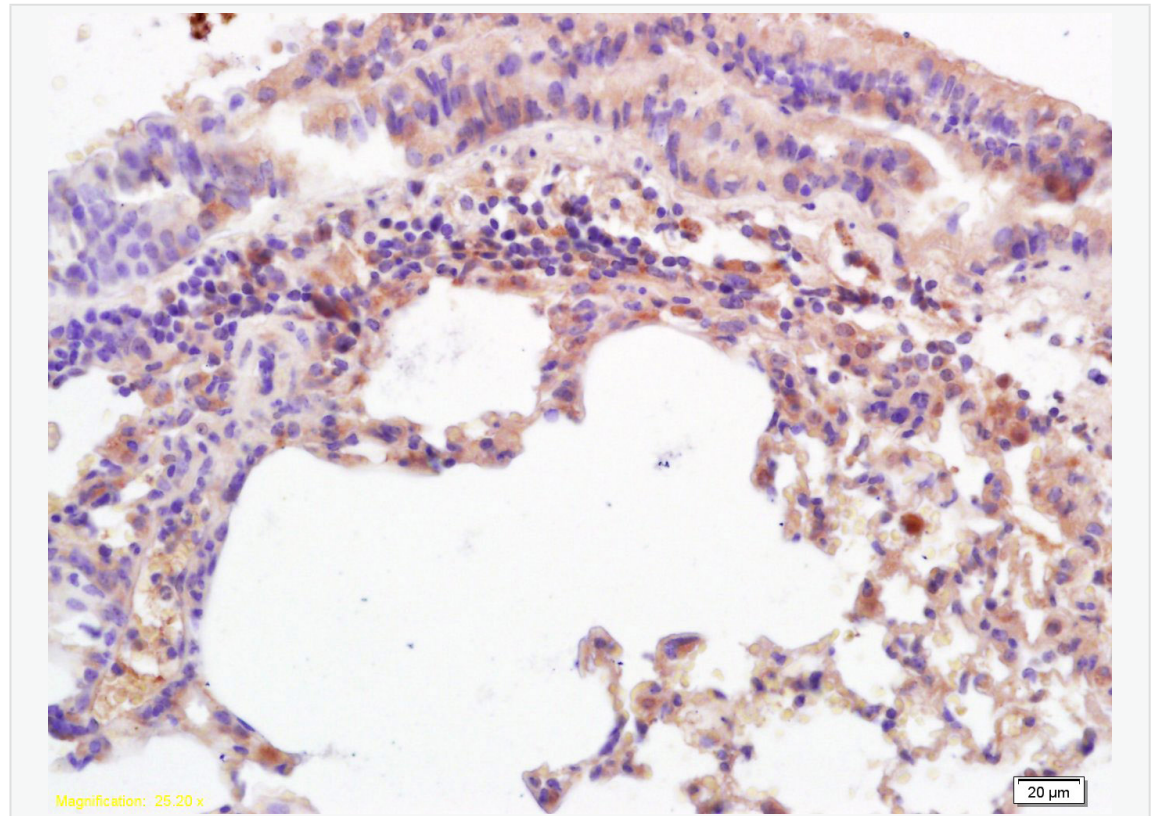
[Unigene: 728757](#) Human

MICA 蛋白是一种细胞应激分子，在正常组织中表达量少，仅在肠道上皮组织表达量稍高，但是在多种 Tumour 细胞，尤其是上皮源性的 Tumour 如肺癌、乳腺癌、肾癌、卵巢癌、结肠癌等细胞表面高表达，并在细胞发生癌变的早期阶段出现在细胞表面。

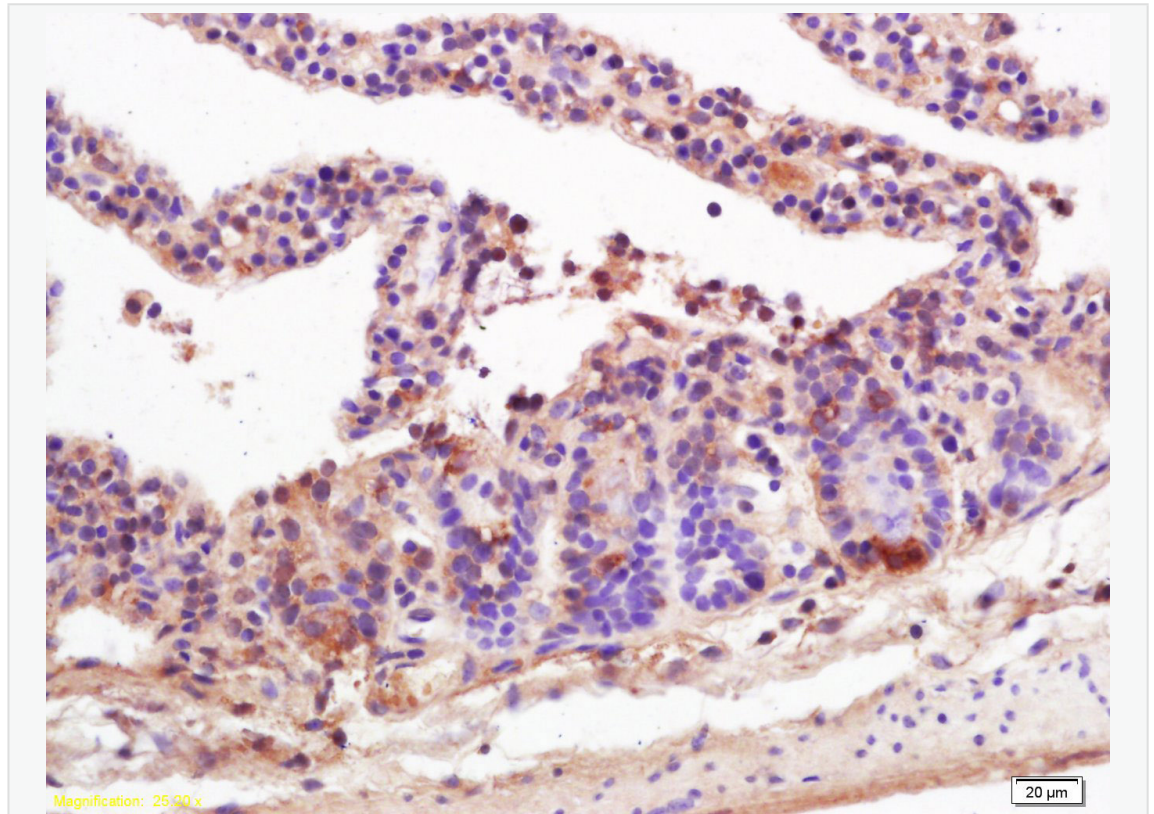
该分子与相应受体 NKG2D 结合后可激活 NK 细胞、Vd1 gd T 细胞、CD8+ T 细胞

的细胞毒作用，从而产生杀伤 Tumour 细胞的生物效应。因此，抗 MICA 特异性抗体在 Tumour 早期诊断、治疗中可能具有更高的敏感性和疗效，从而可实现 Tumour 的“早诊断、早治疗”。并且还能对其它治疗方案的疗效进行早期评估。

**Product
Picture**



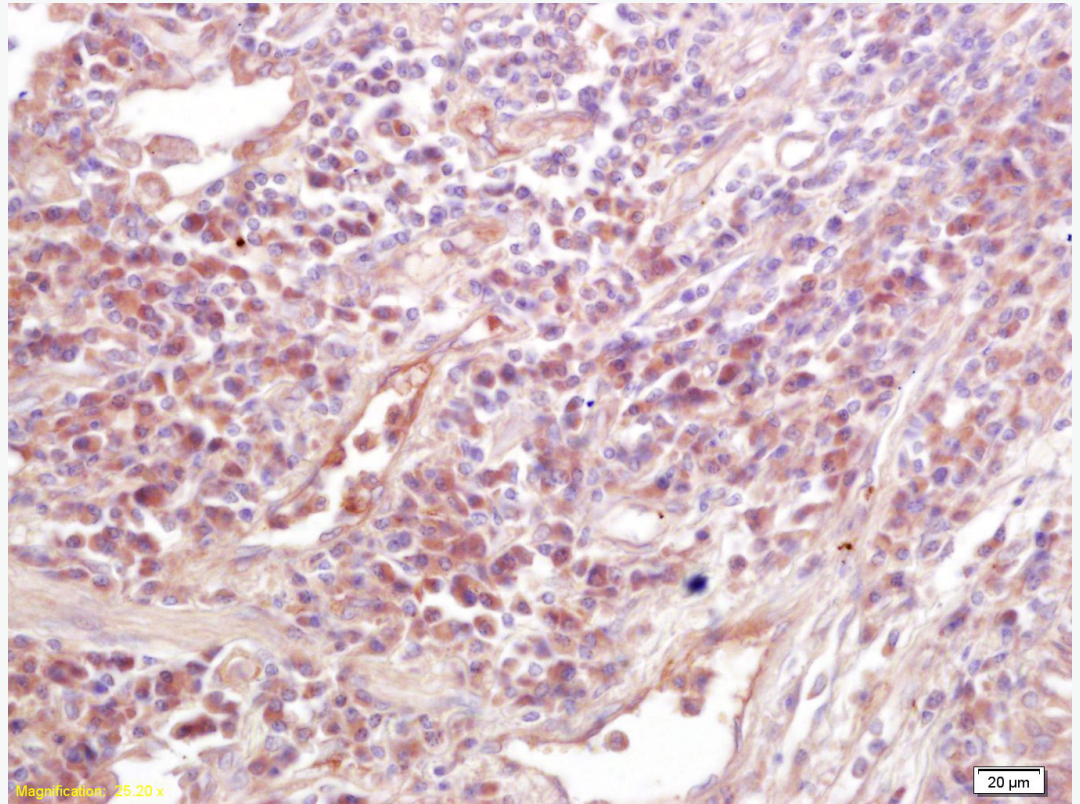
Tissue/cell: mouse lung tissue; 4% Paraformaldehyde-fixed and paraffin-embedded;
Antigen retrieval: citrate buffer (1M, pH 6.0), Boiling bathing for 15min; Block
endogenous peroxidase by 3% Hydrogen peroxide for 30min; Blocking buffer (normal
goat serum,C-0005) at 37°C for 20 min;
Incubation: Anti-MICA/MHC I a Polyclonal Antibody, Unconjugated(SL0832R)
1:200, overnight at 4°C, followed by conjugation to the secondary antibody(SP-0023)
and DAB(C-0010) staining



Tissue/cell: mouse intestine tissue; 4% Paraformaldehyde-fixed and paraffin-embedded;

Antigen retrieval: citrate buffer (1M, pH 6.0), Boiling bathing for 15min; Block endogenous peroxidase by 3% Hydrogen peroxide for 30min; Blocking buffer (normal goat serum,C-0005) at 37°C for 20 min;

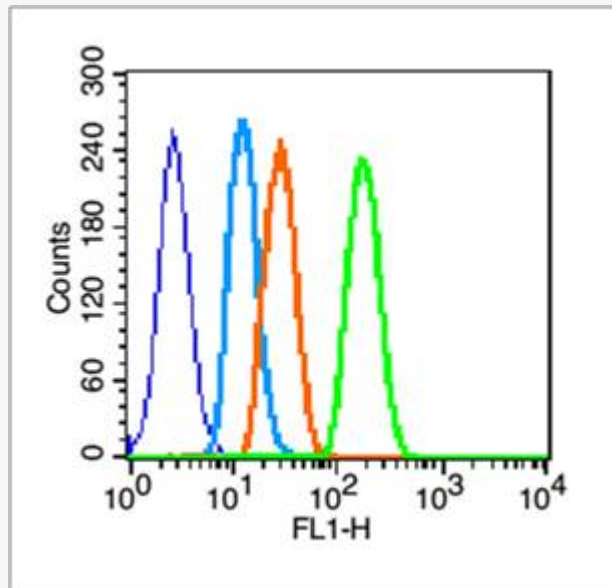
Incubation: Anti-MICA/MHC I a Polyclonal Antibody, Unconjugated(SL0832R) 1:200, overnight at 4°C, followed by conjugation to the secondary antibody(SP-0023) and DAB(C-0010) staining



Tissue/cell: human lung carcinoma; 4% Paraformaldehyde-fixed and paraffin-embedded;

Antigen retrieval: citrate buffer (1M, pH 6.0), Boiling bathing for 15min; Block endogenous peroxidase by 3% Hydrogen peroxide for 30min; Blocking buffer (normal goat serum,C-0005) at 37°C for 20 min;

Incubation: Anti-MICA/MHC I a Polyclonal Antibody, Unconjugated(SL0832R) 1:200, overnight at 4°C, followed by conjugation to the secondary antibody(SP-0023) and DAB(C-0010) staining



Blank control (blue line): A431 (blue).

Primary Antibody (green line): Rabbit Anti-MICA antibody (SL0832R)

Dilution: $1\mu\text{g} / 10^6$ cells;

Isotype Control Antibody (orange line): Rabbit IgG .

Secondary Antibody (white blue line): Goat anti-rabbit IgG-FITC

Dilution: $1\mu\text{g} / \text{test}$.

Protocol

The cells were fixed with 2% paraformaldehyde (10 min) , then permeabilized with 90% ice-cold methanol for 30 min on ice. Cells stained with Primary Antibody for 30 min at room temperature. The cells were then incubated in 1 X PBS/2%BSA/10% goat serum to block non-specific protein-protein interactions followed by the antibody for 15 min at room temperature. The secondary antibody used for 40 min at room



SunLong Biotech Co.,LTD
Tel: 0086-571-56623320 Fax:0086-571-56623318
E-mail:sales@sunlongbiotech.com
www.sunlongbiotech.com

temperature. Acquisition of 20,000 events was performed.