10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

MICB Rabbit pAb

MICB Rabbit pAb
Catalog # AP58556

Product Information

Application	WB
Primary Accession	Q29980
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Calculated MW	42575
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human MICB
Epitope Specificity	81-180/383
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SUBCELLULAR LOCATION	Cell membrane; Single pass type I membrane protein.
SIMILARITY	Belongs to the MHC class I family. MIC subfamily.Contains 1 Ig-like C1-type (immunoglobulin-like) domain.
SUBUNIT	Unlike classical MHC class I molecules, does not form a heterodimer with beta-2-microglobulin. Binds as a monomer to a KLRK1/NKG2D homodimer. KLRK1 forms a complex with HCST/DAP10 in which KLRK1 binds MICB while HCST acts as an adapter molecule which enables signal transduction. Receptor-ligand interaction induces clustering of both proteins in ordered structures called immune synapses and also leads to their intercellular transfer. This is associated with a reduction in the cytotoxicity of KLRK1-expressing cells. Binds to human cytomegalovirus glycoprotein UL16 which causes sequestration of MICB in the endoplasmic reticulum and increases resistance to KLRK1-mediated cytotoxicity.
Post-translational modifications	Proteolytically cleaved and released from the cell surface of tumor cells.
DISEASE	Genetic variations in MICA are a cause of susceptibility to rheumatoid arthritis (RA) [MIM:180300]. It is a systemic inflammatory disease with autoimmune features and a complex genetic component. It primarily affects the joints and is characterized by inflammatory changes in the synovial membranes and articular structures, widespread fibrinoid degeneration of the collagen fibers in mesenchymal tissues, and by atrophy and rarefaction of bony structures. Note=The MICB*004 allele is asociated with rheumatoid arthritis. Note=Genetic variation in MICB is associated with cytomegalovirus and herpes simplex virus I seropositivity and this may be associated with schizophrenia risk.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	This gene encodes a heavily glycosylated protein which is a ligand for the NKG2D type II receptor. Binding of the ligand activates the cytolytic response of natural killer (NK) cells, CD8 alphabeta T cells, and gammadelta T cells which express the receptor. This protein is stress-induced and is similar to

MHC class I molecules; however, it does not associate with beta-2-microglobulin or bind peptides.

Additional Information

Gene ID	4277
Other Names	MHC class I polypeptide-related sequence B, MIC-B, MICB {ECO:0000312|EMBL:CAA62823.1}
Target/Specificity	Widely expressed with the exception of the central nervous system where it is absent. Expressed in many, but not all, epithelial tumors of lung, breast, kidney, ovary, prostate and colon. In hepatocellular carcinomas, expressed in tumor cells but not in surrounding non-cancerous tissue.
Dilution	WB=1:500-2000
Storage	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

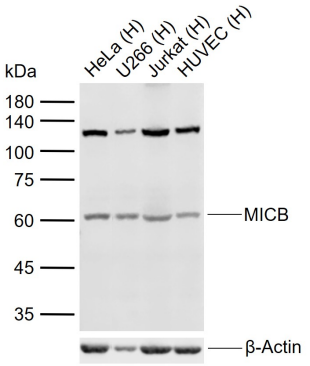
Protein Information

Name	MICB {ECO:0000312|EMBL:CAA62823.1}
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, PubMed: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.
Cellular Location	Cell membrane {ECO:0000250|UniProtKB:Q29983}; Single-pass type I membrane protein {ECO:0000250|UniProtKB:Q29983} Note=Binding to human cytomegalovirus glycoprotein UL16 causes sequestration in the endoplasmic reticulum {ECO:0000250|UniProtKB:Q29983, ECO:0000269|PubMed:12782710}
Tissue Location	Widely expressed with the exception of the central nervous system where it is absent. Expressed in many, but not all, epithelial tumors of lung, breast, kidney, ovary, prostate and colon In hepatocellular carcinomas, expressed in tumor cells but not in surrounding non-cancerous tissue.

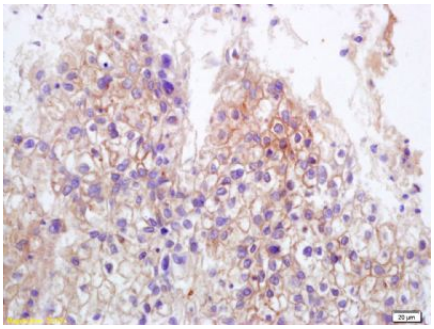
Background

This gene encodes a heavily glycosylated protein which is a ligand for the NKG2D type II receptor. Binding of the ligand activates the cytolytic response of natural killer (NK) cells, CD8 alphabeta T cells, and gammadelta T cells which express the receptor. This protein is stress-induced and is similar to MHC class I molecules; however, it does not associate with beta-2-microglobulin or bind peptides.

Images



Sample:
Lane 1: Human HeLa cell lysates
Lane 2: Human U266 cell lysates
Lane 3: Human Jurkat cell lysates
Lane 4: Human HUVEC cell lysates
Primary: Anti-MICB (AP58556) at 1/1000 dilution
Secondary: IRDye800CW Goat Anti-Rabbit IgG at 1/20000 dilution
Predicted band size: 40 kDa
Observed band size: 60 kDa



Tissue/cell: human lung carcinoma; 4% Paraformaldehyde-fixed and paraffin-embedded;
Antigen retrieval: citrate buffer (0.01M, 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℃ for 20 min;
Incubation: Anti-MICB Polyclonal Antibody, Unconjugated(AP58556) 1:200, overnight at 4°C, followed by conjugation to the secondary antibody(SP-0023) and DAB(C-0010) staining