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MARCH8 Antibody

Catalog # ASC10798

Product Information

Application	WB, ICC, E
Primary Accession	Q5T0T0
Other Accession	NP_659458, 50539410
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	32965
Concentration (mg/ml)	1 mg/mL
Conjugate	Unconjugated
Application Notes	MARCH8 antibody can be used for detection of MARCH8 by Western blot at 0.5 - 1 □g/mL. Antibody can also be used for immunocytochemistry starting at 2.5 □g/mL.

Additional Information

Gene ID	220972
Other Names	E3 ubiquitin-protein ligase MARCH8, 6.3.2.-, Cellular modulator of immune recognition, c-MIR, Membrane-associated RING finger protein 8, Membrane-associated RING-CH protein VIII, MARCH-VIII, RING finger protein 178, MARCH8, MIR, RNF178
Target/Specificity	MARCH8;
Reconstitution & Storage	MARCH8 antibody can be stored at 4℃ for three months and -20℃, stable for up to one year. As with all antibodies care should be taken to avoid repeated freeze thaw cycles. Antibodies should not be exposed to prolonged high temperatures.
Precautions	MARCH8 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	MARCHF8 (HGNC:23356)
Synonyms	MARCH8, MIR, RNF178
Function	E3 ubiquitin-protein ligase that plays several important roles in innate immunity and adaptive immunity (PubMed:34285233, PubMed:35019698, PubMed:35503863). Mediates ubiquitination of CD86 and MHC class II proteins, such as HLA-DR alpha and beta, and promotes their subsequent endocytosis and sorting to lysosomes via multivesicular bodies

	(PubMed:19117940, PubMed:19566897). Possesses a very broad antiviral activity by specifically inactivating different viral fusion proteins (PubMed:32934085). Targets and ubiquitinates cytoplasmic lysine residues of viral envelope glycoproteins with single transmembrane domains leading to their lysosomal degradation (PubMed:35019698). Therefore, shows broad-spectrum inhibition against many viruses including retroviruses, rhabdoviruses, arenaviruses, sarbecoviruses or influenzaviruses (PubMed:34285233, PubMed:35019698). Strongly blocks human immunodeficiency virus type 1 envelope glycoprotein incorporation into virions by down-regulating its cell surface expression. Also blocks ebola virus glycoprotein/GP incorporation via surface down-regulation (PubMed:32934085). Mediates 'Lys-63'-linked polyubiquitination of influenza M2 to target it to lysosome for degradation (PubMed:34285233). Mediates the regulation of constitutive ubiquitination and trafficking of the viral restriction factor BST2 within the endocytic pathway (PubMed:28320822). Plays a role in maintenance of immune tolerance to self by promoting the turnover and proteasomal degradation of PD-L1/CD274 via ubiquitination (PubMed:34183449). Catalyzes the 'Lys-63'-linked polyubiquitylation of cGAS thereby inhibiting its DNA binding ability and impairing its antiviral innate immunity (PubMed:35503863). Negatively regulates IL7- mediated T-cell homeostasis by mediating 'Lys-27'-linked polyubiquitination of IL7R, leading to its lysosomal degradation (PubMed:39311660).
Cellular Location	Golgi apparatus membrane. Endoplasmic reticulum membrane. Cytoplasmic vesicle membrane; Multi-pass membrane protein. Lysosome membrane; Multi-pass membrane protein. Early endosome membrane; Multi-pass membrane protein
Tissue Location	Broadly expressed. Present in immature dendritic cells (at protein level).

Background

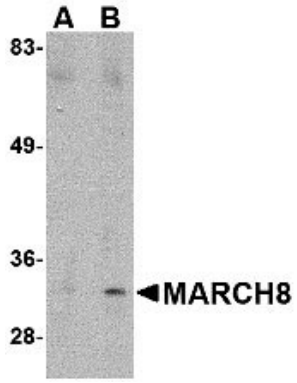
MARCH8 Antibody: MARCH8 (c-MIR) is a novel E3 ubiquitin ligase designated as the modulator of immune recognition (MIR) family, whose catalytic domain is a variant RING domain (RING-CH domain). MARCH8 was found as a functional and structural homolog of KSHV MIR1 and MIR2. MARCH8 targets B7-2 to lysosomal degradation and down-regulates the B7-2 surface expression through ubiquitination of its cytoplasmic tail. Furthermore, MARCH8 has been shown to down-regulate the expression of transferrin receptor and Fas, an important molecule for the induction of apoptosis. MARCH8 is the first example of an E3 ubiquitin ligase that is capable of inhibiting MHC II expression. Recent findings suggest that MARCH8 may regulate immune responses by promoting ubiquitination of MHC-II and CD86, leading to their subsequent endocytosis and lysosomal degradation.

References

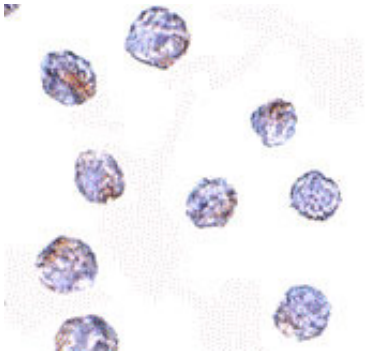
Coscoy L, Sanchez DJ, and Ganem D. A novel class of herpesvirus-encoded membrane-bound E3 ubiquitin ligases regulates endocytosis of proteins involved in immune recognition. J. Cell Biol. 2001; 155:126573.
Goto E, Ishido S, Sato Y, et al. c-MIR, a human E3 ubiquitin ligase, is a functional homolog of herpesvirus proteins MIR1 and MIR2 and has similar activity. J. Biol. Chem.2003; 278:14657-68.
Ohmura-Hoshino M, Goto E, Matsuki Y, et al. A novel family of membrane-bound E3 ubiquitin ligases. J. Biochem.2006; 140:147-54.
Bartee E, Mansouri M, Hovey Nerenberg BT, et al. Downregulation of major histocompatibility complex class I by human ubiquitin ligases related to viral immune evasion proteins. J. Virol.2004; 78:1109-20.

Images

Western blot analysis of MARCH8 in HeLa cell lysate with



MARCH8 antibody at (A) 0.5 µg/ml and (B) 1 µg/mL.



Immunocytochemistry of MARCH8 in HeLa cells with MARCH8 antibody at 2.5 µg/mL.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.