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ADRM1 Antibody

Catalog # ASC11901

Product Information

Application	WB, E, IHC-P
Primary Accession	Q16186
Other Accession	NP_783163, 28373194
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	42153
Concentration (mg/ml)	1 mg/mL
Conjugate	Unconjugated
Application Notes	ADRM1 antibody can be used for detection of ADRM1 by Western blot at 1 - 2 g/mL. Antibody can also be used for immunohistochemistry starting at 5 g/mL.

Additional Information

Gene ID	11047
Other Names	Proteasomal ubiquitin receptor ADRM1, 110 kDa cell membrane glycoprotein, Gp110, Adhesion-regulating molecule 1, ARM-1, Proteasome regulatory particle non-ATPase 13, hRpn13, Rpn13 homolog, ADRM1, GP110
Target/Specificity	ADRM1; ADRM1 antibody is human, mouse and rat reactive. At least two isoforms of ADRM1 are know to exist; this antibody will detect both isoforms.
Reconstitution & Storage	ADRM1 antibody can be stored at 4℃ for three months and -20℃, stable for up to one year.
Precautions	ADRM1 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	ADRM1
Synonyms	GP110
Function	Component of the 26S proteasome, a multiprotein complex involved in the ATP-dependent degradation of ubiquitinated proteins (PubMed:16815440, PubMed:16906146, PubMed:16990800, PubMed:17139257, PubMed:18497817, PubMed:24752541, PubMed:25702870, PubMed:25702872). This complex plays a key role in the maintenance of protein homeostasis by removing misfolded or damaged proteins, which could impair cellular functions, and by removing proteins whose functions are

no longer required (PubMed:16815440, PubMed:16906146, PubMed:16990800, PubMed:17139257, PubMed:18497817, PubMed:24752541, PubMed:25702870, PubMed:25702872). Therefore, the proteasome participates in numerous cellular processes, including cell cycle progression, apoptosis, or DNA damage repair (PubMed:16815440, PubMed:16906146, PubMed:16990800, PubMed:17139257, PubMed:18497817, PubMed:24752541, PubMed:25702870, PubMed:25702872). Within the complex, functions as a proteasomal ubiquitin receptor (PubMed:18497817). Engages and activates 19S- associated deubiquitinases UCHL5 and PSMD14 during protein degradation (PubMed:16906146, PubMed:16990800, PubMed:17139257, PubMed:24752541). UCHL5 reversibly associate with the 19S regulatory particle whereas PSMD14 is an intrinsic subunit of the proteasome lid subcomplex (PubMed:16906146, PubMed:16990800, PubMed:17139257, PubMed:24752541).

Cellular Location Cytoplasm. Nucleus

Background

The adhesion-regulating molecule 1 (ADRM1) is thought to be involved in protein recruitment and cell adhesion and functions as a proteasomal ubiquitin receptor (1). ADRM1 promotes the activity of UCH-L5 and plays a role in lymphocyte homing. The carboxy-terminal domain of mammalian ADRM1 serves to bind and enhance the isopeptidase activity of UCHL5/UCH37, perhaps serving as a mechanism to accelerate ubiquitin chain disassembly (2,3). ADRM1 expression is induced by IFN-gamma in some cancer cell lines and its expression is upregulated in other metastatic cells, suggesting a role in carcinogenesis (4,5).

References

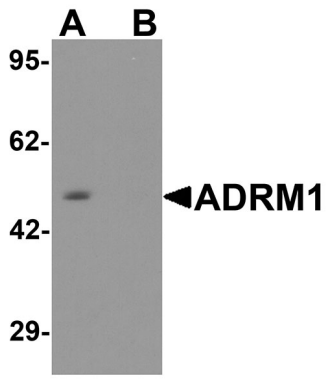
Husnjak K, Elsasser S, Zhang N, et al. Proteasome subunit Rpn13 is a novel ubiquitin receptor. Nature 2008; 453:481-8.

Yao T, Song L, Xu W, et al. Proteasome recruitment and activation of the Uch37 deubiquitinating enzyme by Adrm1. Nat. Cell Biol. 2006; 8:994-1002.

Qiu XB, Ouyang SY, Li CJ, et al. hRpn13/ADRM1/GP110 is a novel proteasome subunit that binds the deubiquitinating enzyme, UCH37. EMBO J. 2006; 25:5742-53.

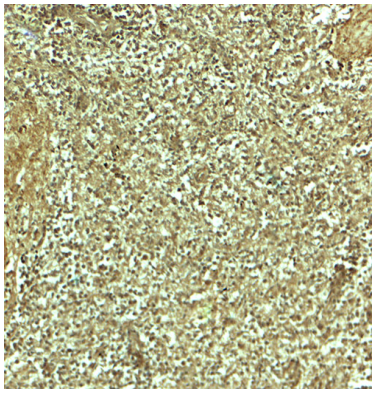
Al-Shami A, Jhaver KG, Vogel P, et al. Regulators of the proteasome pathway, Uch37 and Rpn13, play distinct roles in mouse development. PLoS One 2010; 5:e13654.

Images



Western blot analysis of ADRM1 in EL cell lysate with ADRM1 antibody at 1 µg/ml in (A) the absence and (B) the presence of blocking peptide.

Immunohistochemistry of ADRM1 in human spleen tissue with ADRM1 antibody at 5 µg/mL.



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