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PSMD14 Antibody (C-term)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP19256b

Product Information

Application	WB, E
Primary Accession	O00487
Other Accession	O35593, NP_005796.1
Reactivity	Human
Predicted	Mouse, Rat, Bovine, Canine, Rabbit, Chicken
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB40997
Calculated MW	34577
Antigen Region	258-287

Additional Information

Gene ID	10213
Other Names	26S proteasome non-ATPase regulatory subunit 14, 3419-, 26S proteasome regulatory subunit RPN11, 26S proteasome-associated PAD1 homolog 1, PSMD14, POH1
Target/Specificity	This PSMD14 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 258-287 amino acids from the C-terminal region of human PSMD14.
Dilution	WB~~1:1000 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	PSMD14 Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	PSMD14
Synonyms	POH1

Function	Component of the 26S proteasome, a multiprotein complex involved in the ATP-dependent degradation of ubiquitinated proteins. 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. Therefore, the proteasome participates in numerous cellular processes, including cell cycle progression, apoptosis, or DNA damage repair (PubMed:9374539, PubMed:1317798). The PSMD14 subunit is a metalloprotease that specifically cleaves 'Lys-63'-linked polyubiquitin chains within the complex (PubMed:22909820). Plays a role in response to double-strand breaks (DSBs): acts as a regulator of non-homologous end joining (NHEJ) by cleaving 'Lys-63'-linked polyubiquitin, thereby promoting retention of JMJD2A/KDM4A on chromatin and restricting TP53BP1 accumulation (PubMed:22909820). Also involved in homologous recombination repair by promoting RAD51 loading (PubMed:22909820). Regulates macroautophagy by ensuring Golgi-to-ER retrograde transport through its deubiquitinating activity on K63-linked ubiquitin chains. This activity prevents the retention of essential autophagy proteins at the Golgi, enabling their trafficking to autophagosome formation sites and supporting Golgi-ER membrane recycling critical for effective autophagy (PubMed:32210007).
Tissue Location	Widely expressed. Highest levels in heart and skeletal muscle.

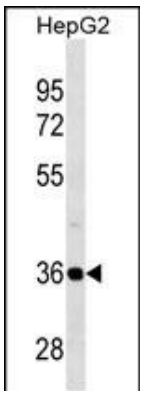
Background

PSMD14 is a component of the 26S proteasome, a multiprotein complex that degrades proteins targeted for destruction by the ubiquitin pathway (Spataro et al., 1997 [PubMed 9374539]).

References

Byrne, A., et al. Exp. Cell Res. 316(2):258-271(2010)
Ma, Z., et al. Pediatr Int 51(5):732-735(2009)
Cooper, E.M., et al. EMBO J. 28(6):621-631(2009)
Koulich, E., et al. Mol. Biol. Cell 19(3):1072-1082(2008)
Ewing, R.M., et al. Mol. Syst. Biol. 3, 89 (2007) :

Images



PSMD14 Antibody (C-term) (Cat. #AP19256b) western blot analysis in HepG2 cell line lysates (35ug/lane).This demonstrates the PSMD14 antibody detected the PSMD14 protein (arrow).

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