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Anti-PSMD14 Rabbit Monoclonal Antibody

Catalog # ABO15614

Product Information

Application	WB, IHC, IF, ICC
Primary Accession	O00487
Host	Rabbit
Isotype	IgG
Reactivity	Rat, Human, Mouse
Clonality	Monoclonal
Format	Liquid
Description	Anti-PSMD14 Rabbit Monoclonal Antibody . Tested in WB, IHC, ICC/IF applications. This antibody reacts with Human, Mouse, Rat.

Additional Information

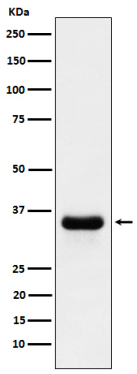
Gene ID	10213
Other Names	26S proteasome non-ATPase regulatory subunit 14, 3.4.19.-, 26S proteasome regulatory subunit RPN11, 26S proteasome-associated PAD1 homolog 1, PSMD14, POH1
Calculated MW	34577
Application Details	WB 1:500-1:2000 IHC 1:50-1:200 ICC/IF 1:50-1:200
Source	Eukaryota
Contents	Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol, 0.4-0.5mg/ml BSA.
Clone Names	Clone: 21P90
Immunogen	A synthesized peptide derived from human PSMD14
Purification	Affinity-chromatography
Storage	Store at -20°C for one year. For short term storage and frequent use, store at 4°C for up to one month. Avoid repeated freeze-thaw cycles.

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.

Images



Western blot analysis of PSMD14 expression in HeLa cell lysate.