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PSMD14 Antibody
Rabbit mAb
Catalog # AP92194

Specification

PSMD14 Antibody - Product Information

Application	**WB, IHC, ICC**
Primary Accession	O00487
Reactivity	**Rat**
Clonality	**Monoclonal**

Other Names
26S proteasome non-ATPase regulatory subunit 14; PAD1; POH1; Psmd14; RPN11;

Isotype	**Rabbit IgG**
Host	**Rabbit**
Calculated MW	**34577 Da**

PSMD14 Antibody - Additional Information

Dilution	**WB~~1:1000** **IHC~~1:100~500** **ICC~~N/A**
Purification	**Affinity-chromatography**
Immunogen	**A synthesized peptide derived from human PSMD14**
Description	**Metalloprotease component of the 26S proteasome that specifically cleaves 'Lys-63'-linked polyubiquitin chains. The 26S proteasome is involved in the ATP-dependent degradation of ubiquitinated proteins. The function of the 'Lys-63'-specific deubiquitination of the proteasome is unclear.**
Storage Condition and Buffer	**Rabbit IgG in phosphate buffered saline , pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol. Store at +4°C short term. Store at -20°C long term. Avoid freeze / thaw cycle.**

PSMD14 Antibody - 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).

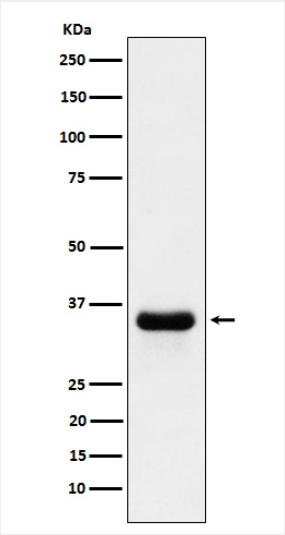
Tissue Location
Widely expressed. Highest levels in heart and skeletal muscle.

PSMD14 Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

PSMD14 Antibody - Images



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Western blot analysis of PSMD14 expression in HeLa cell lysate.