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ZMPSTE24 Antibody (Center)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP2415A

Specification

ZMPSTE24 Antibody (Center) - Product Information

Application	**WB, IHC-P,E**
Primary Accession	O75844
Other Accession	Q80W54, NP_005848
Reactivity	**Human**
Predicted	**Mouse**
Host	**Rabbit**
Clonality	**Polyclonal**
Isotype	**Rabbit IgG**
Antigen Region	**400-430**

ZMPSTE24 Antibody (Center) - Additional Information

Gene ID 10269

Other Names
CAAX prenyl protease 1 homolog, Farnesylated proteins-converting enzyme 1, FACE-1, Prenyl protein-specific endoprotease 1, Zinc metalloproteinase Ste24 homolog, ZMPSTE24, FACE1, STE24

Target/Specificity
This ZMPSTE24 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 400-430 amino acids from the Central region of human ZMPSTE24.

Dilution
WB~~1:1000
IHC-P~~1:50~100

Format
Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation followed by dialysis against PBS.

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
ZMPSTE24 Antibody (Center) is for research use only and not for use in diagnostic or therapeutic procedures.

ZMPSTE24 Antibody (Center) - Protein Information

Name ZMPSTE24 {ECO:0000303|PubMed:28246125, ECO:0000312|HGNC:HGNC:12877}

Function Transmembrane metalloprotease whose catalytic activity is critical for processing lamin A/LMNA on the inner nuclear membrane and clearing clogged translocons on the endoplasmic reticulum (PubMed:33315887, PubMed:33293369). Proteolytically removes the C- terminal three residues of farnesylated proteins (PubMed:33315887, PubMed:33293369). Plays also an antiviral role independently of its protease activity by restricting enveloped RNA and DNA viruses, including influenza A, Zika, Ebola, Sindbis, vesicular stomatitis, cowpox, and vaccinia (PubMed:28246125, PubMed:28169297). Mechanistically, controls IFITM antiviral pathway to hinder viruses from breaching the endosomal barrier by modulating membrane fluidity (PubMed:35283811).

Cellular Location
Endoplasmic reticulum membrane; Multi-pass membrane protein. Nucleus inner membrane; Multi-pass membrane protein. Early endosome membrane; Multi-pass membrane protein. Late endosome membrane; Multi-pass membrane protein

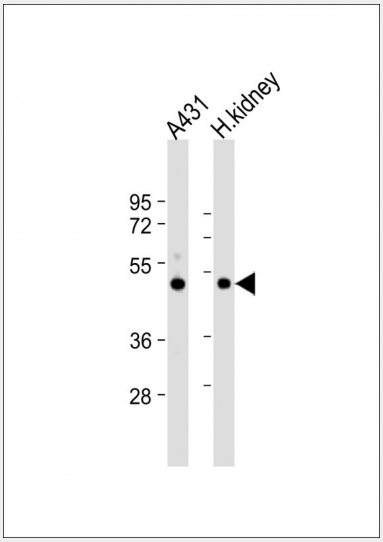
Tissue Location
Widely expressed. High levels in kidney, prostate, testis and ovary.

ZMPSTE24 Antibody (Center) - Protocols

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

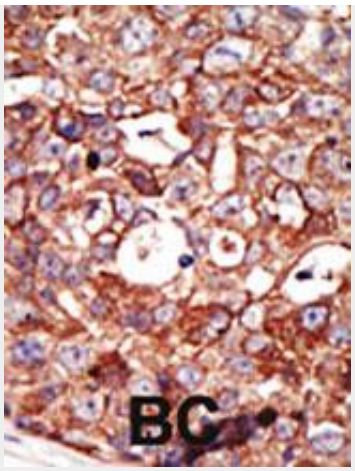
- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

ZMPSTE24 Antibody (Center) - Images



All lanes : Anti-ZMPSTE24 Antibody (E415) at 1:1000 dilution Lane 1: A431 whole cell lysate Lane 2: human kidney lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 55 kDa Blocking/Dilution buffer: 5% NFDM/TBST.

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Formalin-fixed and paraffin-embedded human cancer tissue reacted with the primary antibody, which was peroxidase-conjugated to the secondary antibody, followed by DAB staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated. BC = breast carcinoma; HC = hepatocarcinoma.

ZMPSTE24 Antibody (Center) - Background

ZMPSTE24 is a zinc metalloprotease similar to yeast Ste24p. It is an integral membrane protein belonging to peptidase family M48 and is found in the endoplasmic reticulum and possibly in the Golgi compartment. It is thought to be involved in the proteolytic processing of farnesylated proteins.

ZMPSTE24 Antibody (Center) - References

Freije, J.M., et al., Genomics 58(3):270-280 (1999).
Kumagai, H., et al., Biochim. Biophys. Acta 1426(3):468-474 (1999).
Tam, A., et al., J. Cell Biol. 142(3):635-649 (1998).

ZMPSTE24 Antibody (Center) - Citations

- Progeroid syndrome patients with ZMPSTE24 deficiency could benefit when treated with rapamycin and dimethylsulfoxide.
- Genomic instability in laminopathy-based premature aging.
- Prelamin A endoproteolytic processing in vitro by recombinant Zmpste24.