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PMEPA1 Antibody
Catalog # ASC11945

Specification

PMEPA1 Antibody - Product Information

Application	**WB, IHC**
Primary Accession	Q969W9
Other Accession	NP_064567, 21361841
Reactivity	**Human, Mouse, Rat**
Host	**Rabbit**
Clonality	**Polyclonal**
Isotype	**IgG**
Calculated MW	**Predicted: 26, 28, 32 kDa** **Observed: 27 kDa KDa**
Application Notes	**PMEPA1 antibody can be used for detection of PMEPA1 by Western blot at 1 - 2 µg/ml. Antibody can also be used for immunohistochemistry starting at 2.5 µg/mL.**

PMEPA1 Antibody - Additional Information

Gene ID **56937**

Target/Specificity
PMEPA1; PMEPA1 antibody is human, mouse and rat reactive. At least four isoforms are known to exist; this antibody will detect all of the isoforms.

Reconstitution & Storage
PMEPA1 antibody can be stored at 4℃ for three months and -20℃, stable for up to one year.

Precautions
PMEPA1 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

PMEPA1 Antibody - Protein Information

Name PMEPA1

Synonyms STAG1, TMEPAI

Function
Functions as a negative regulator of TGF-beta signaling and thereby probably plays a role in cell proliferation, differentiation, apoptosis, motility, extracellular matrix production and immunosuppression. In the canonical TGF-beta pathway, ZFYVE9/SARA recruits the intracellular signal transducer and transcriptional modulators SMAD2 and SMAD3 to the TGF-beta receptor. Phosphorylated by the receptor, SMAD2 and SMAD3 then form a heteromeric complex with SMAD4 that translocates to the nucleus to regulate transcription. Through interaction with SMAD2 and SMAD3, LDLRAD4 may compete with ZFYVE9 and SMAD4 and prevent propagation of the

intracellular signal (PubMed:20129061, PubMed:24627487). Also involved in down-regulation of the androgen receptor (AR), enhancing ubiquitination and proteasome- mediated degradation of AR, probably by recruiting NEDD4 (PubMed:18703514).

Cellular Location
Early endosome membrane; Single-pass membrane protein. Golgi apparatus membrane; Single-pass membrane protein

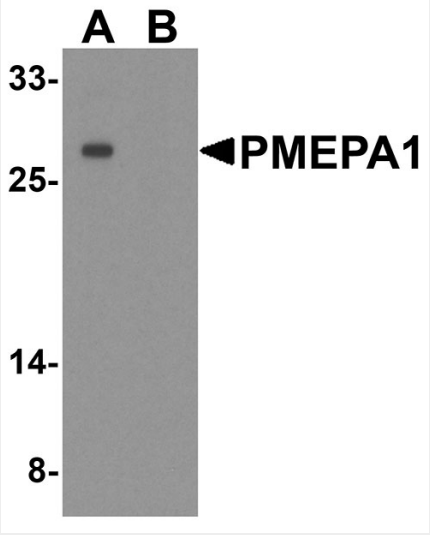
Tissue Location
Highest expression in prostate. Also expressed in ovary

PMEPA1 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

PMEPA1 Antibody - Images



Western blot analysis of PMEPA1 inA549 cell lysate with PMEPA1 antibody at 1 µg/ml in (A) the absence and (B) the presence of blocking peptide.

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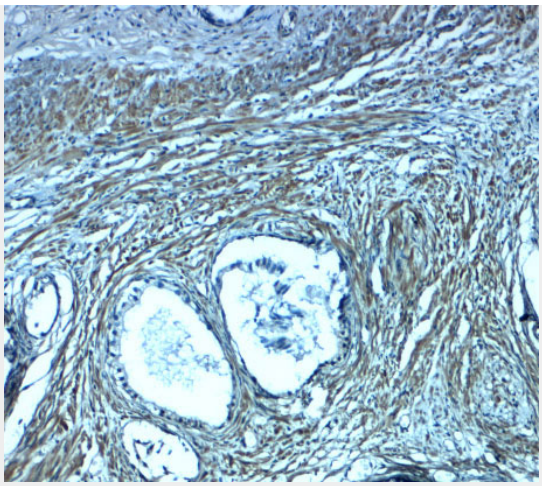

Immunohistochemistry of PMEPA1 in human prostate tissue with PMEPA1 antibody at 2.5 µg/ml.

PMEPA1 Antibody - Background

The prostate transmembrane protein, androgen induced 1 (PMEPA1) protein is a transmembrane protein that contains a Smad interacting motif (SIM) (1,2). Expression of this gene is induced by androgens and transforming growth factor beta, and the encoded protein suppresses the androgen receptor and transforming growth factor beta signaling pathways though interactions with Smad proteins (3). Overexpression of this gene may play a role in multiple types of cancer (2,4).

PMEPA1 Antibody - References

Xu LL, Shanmugam N, Segawa T, et al. A novel androgen-regulated gene, PMEPA1, located on chromosome 20q!3 exhibits high level expression in prostate. Genomics 2000; 66:257-63.
Rae FK, Hooper JD, Nicol DL, et al. Characterization of a novel gene, STAG1/PMEPA1, upregulated in renal cell carcinoma and other solid tumors. Mol. Carcinog. 2001; 32:44-53.
Watanabe Y, Itoh S, Goto T, et al. TMEPAI, a transmembrane TGF-beta-inducible protein, sequesters Smad proteins from active participation in TGF-beta signaling. Mol. Cell 2010; 37:123-34.
Vo Nguyen TT, Watanabe Y, Shiba A, et al. TMEPAI/PMEPA1 enhances tumorigenic activities in lung cancer cells. Cancer Sci. 2014; 105:334-41.