

Datasheet for ABIN954212
anti-PMEPA1 antibody



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3 Images

Overview

Quantity:	50 µg
Target:	PMEPA1
Reactivity:	Human
Host:	Rabbit
Clonality:	Polyclonal
Conjugate:	This PMEPA1 antibody is un-conjugated
Application:	Western Blotting (WB), Immunofluorescence (IF), Immunohistochemistry (Paraffin-embedded Sections) (IHC (p)), Enzyme Immunoassay (EIA)

Product Details

Immunogen:	Synthetic peptide from Human TMEPA. Epitope: Internal.
Isotype:	IgG
Specificity:	This antibody detects endogenous levels of total TMEPA protein.
Cross-Reactivity (Details):	Species reactivity (tested):Human.
Purification:	Immunoaffinity Chromatography

Target Details

Target:	PMEPA1
Alternative Name:	PMEPA1 / STAG1 (PMEPA1 Products)
Background:	The abnormal activation of the epidermal growth factor (EGF) pathway is one of the most

common findings in human cancer, and a number of molecular devices of laboratory and clinical relevance have been designed to block this transduction pathway. The activation of 4 EGF receptor family members resulted in to large number of cellular events that might be regulating the metastasis and cell growth. The identification of new molecular targets working downstream of these pathways may provide new sites for therapeutic interventions for cancer diagnosis and potentially prevention and therapy. Several EGF target genes have been identified, one of them is Erg1.2 a mouse homolog of the solid tumor associated gene STAG1. Both in humans and in mice, it belongs to a new gene family that can give origin to several protein isoforms through alternative splicing and/or multiple translation starts. Sequence analysis and experimental data suggest that ERG1.2 is likely to function as a membrane-bound protein interacting with downstream signaling molecules through WW- and SH3-binding domains. Other members of this family include TMEPA1, and TPD52. PMEPA1 was identified originally as a highly androgen-inducible gene with prostate-abundant expression that was restricted to prostatic epithelial cells. PMEPA1 protein is a NEDD4 (ubiquitin-protein isopeptide ligase)-binding protein, which negatively regulates prostate cancer cell growth (1). During prostate cancer progression TMEPA1 gene transcription is reduced or lost suggesting a direct role of epigenetic events in this process. PMEPA1 negatively regulates AR protein levels in different cell culture models. Transient expression of PMEPA1 down-regulates AR protein levels and AR transcriptional targets in prostate cancer cells. Conversely, knockdown of PMEPA1 leads to elevated levels of AR protein, AR transcriptional targets (prostate-specific antigen), and increased cell cycle S phase. The TMEPA1 mutant cells are impaired in NEDD4 recruitment shows attenuated AR ubiquitination and AR protein down-regulation. Certain epigenetic cascade events contributes to the selective growth advantage during tumor progression. During prostate cancer progression the TMEPA1 gene is reduced or lost as a result of DNA methylation of SP1 sites within the PMEPA1 promoter may also contribute to the repression of PMEPA1 gene (2). The TMEPA1 negatively regulates the stability of AR protein by enhancing AR ubiquitination and proteosome-mediated degradation through NEDD4 and the TMEPA1-AR degradation pathway may represent a new androgen-dependent mechanism for regulating AR levels in prostate epithelial cells. The decrease in TMEPA1 in prostate cancers may lead to an increase in AR function and strengthen the biological role of TMEPA1 in prostate cancers. TMEPA1 is a 254 amino acid (apparent MW 30-31 kDa) protein highly expressed in prostate cells.Synonyms: Solid tumor-associated 1 protein, TMEPAI, Transmembrane prostate androgen-induced protein

Gene ID: 56937

NCBI Accession: [NP_064567](#)

Target Details

Pathways: [Intracellular Steroid Hormone Receptor Signaling Pathway](#)

Application Details

Application Notes: Optimal working dilution should be determined by the investigator.

Restrictions: For Research Use only

Handling

Concentration: 1.0 mg/mL

Buffer: PBS (without Mg²⁺, Ca²⁺), pH 7.4, 150 mM Sodium Chloride, 0.02 % Sodium Azide and 50 % Glycerol

Preservative: Sodium azide

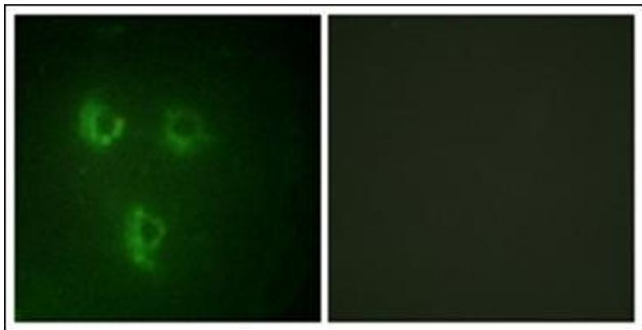
Precaution of Use: This product contains sodium azide: a POISONOUS AND HAZARDOUS SUBSTANCE which should be handled by trained staff only.

Handling Advice: Avoid repeated freezing and thawing.

Storage: 4 °C/-20 °C

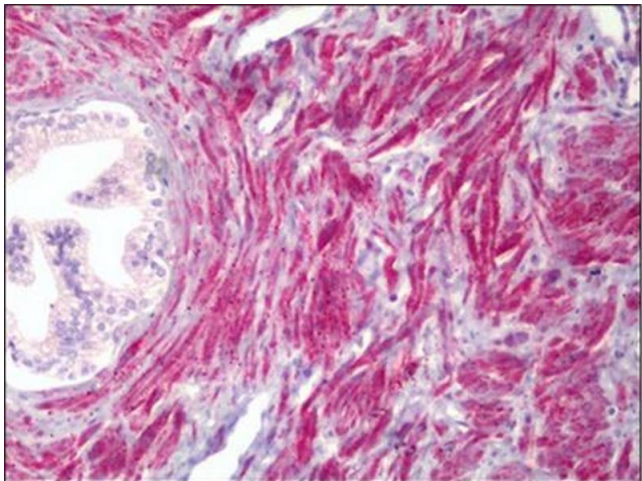
Storage Comment: Store the antibody undiluted at 2-8 °C for one month or (in aliquots) at -20 °C for longer.

Images



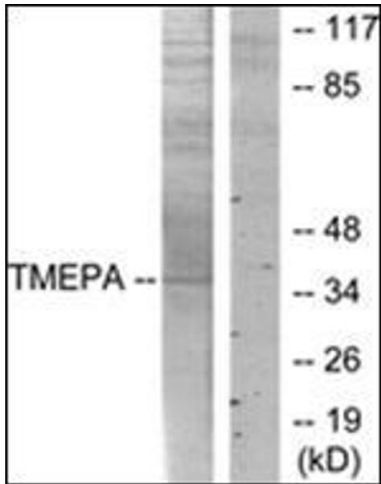
Immunofluorescence

Image 1. Immunofluorescence analysis of HuvEc cells, using TMEPA Antibody. The picture on the right is treated with the synthesized peptide.



Immunohistochemistry (Paraffin-embedded Sections)

Image 2. Human Prostate, Smooth Muscle: Formalin-Fixed, Paraffin-Embedded (FFPE)



Western Blotting

Image 3. Western blot analysis of extracts from HT-29 cells, using TMEPA Antibody. The lane on the right is treated with the synthesized peptide.