FabGennix
International Incorporated

FabGennix International, Inc.
9191 Kyser Way Bldg. 4 Suite 402
Frisco, TX 75033

Tel: (214)-387-8105, 1-800-786-1236   Fax: (214)-387-8105   Email: info@fabgennix.com   Web: www.FabGennix.com

Rabbit Polyclonal Anti-TMEPAI antibody

Catalog Number: TMEPA1-101AP

Lot Number:

General Information

Product	TMEPAI Antibody
Description	Prostate transmembrane protein, androgen induced 1 isoform B Antibody
Accession #	Uniprot: D2KUZ7 NCBI: NP_001108307.1
Verified Applications	ELISA, WB
Species Cross Reactivity	Human
Host	Rabbit
Immunogen	Synthetic peptide corresponding to unique amino acid sequence on TMEPA1 protein.
Alternative Nomenclature	PMEPA1 antibody, STAG1 antibody, TMEPAI antibody, Transmembrane prostate androgen induced protein antibody

Physical Properties

Quantity	100 µg
Volume	200 µl
Form	Affinity Purified Immunoglobulins
Immunoglobulin & Concentration	.65-.69 mg/ml IgG in antibody stabilization buffer
Storage	Store at -20ºC for long term storage.

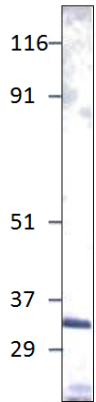## Recommended Dilutions

DOT Blot	1:20,000-1:50,000
ELISA	1:20,000-1:50,000
Western Blot	1:500-1:1,000

Related Products | Catalog

BIOTIN-Conjugated	TMEPA1-BIOTIN
FITC-Conjugated	TMEPA1-FITC
Antigenic Blocking Peptide	P-TMEPA1
Western Blot Positive Control	PC-TMEPA1

Application Verification:

WB of TMEPA1-101AP with PC-TMEPA1. 1:1,000 antibody, dilution in DiluObuffer.

Dilutions are for reference only. Applications not listed above are not necessarily precluded from working with this antibody. Investigators intending to use an application that has not been verified can request a complimentary sample.

Overview:

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 is peptide 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 contribute 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 proteasome-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 30-31kDa) protein highly expressed in prostate cells. The TMEPA1-selective antibodies were generated against purified protein. The TMEPA1 protein was emulsified with adjuvants to achieve the desired antigenicity before injecting in to rabbits to obtained antibodies. The antibodies were isolated on an immobilized antigen based affinity matrix before stabilizing them in antibody stabilization buffer. The TMEPA1 antibodies label TMEPA1 protein as a single 30kDa band in PC-TMEPA1 samples.

References:

1. Li H, Xu LL, Masuda K, Raymundo E, McLeod DG, Dobi A, Srivastava S. A feedback loop between the androgen receptor and a NEDD4-binding protein, PMEPA1, in prostate cancer cells. J Biol Chem. 2008 Oct 24; 283(43):28988-95.
2. Richter E, Masuda K, Cook C, Ehrich M, Tadese AY, Li H, Owusu A, Srivastava S, Dobi A. A role for DNA methylation in regulating the growth suppressor PMEPA1 gene in prostate cancer. Epigenetics. 2007 Apr-Jun;2(2):100-9.Erratum in: Epigenetics. 2008 Jan-Feb; 3(1):51.