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PERP Antibody

Catalog # ASC10141

Product Information

Application	WB, ICC, E
Primary Accession	Q9JK95
Other Accession	NP_071404, 11528520
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	21567
Concentration (mg/ml)	1 mg/mL
Conjugate	Unconjugated
Application Notes	PERP antibody can be used for detection of PERP by Western blot at 1 g/mL. Antibody can also be used for immunocytochemistry starting at 10 g/mL.

Additional Information

Gene ID	64058
Other Names	PERP Antibody: THW, KCP1, PIGPC1, KRTCAP1, 1110017A08Rik, Krtcap1, p53 apoptosis effector related to PMP-22, Keratinocyte-associated protein 1, KCP-1, PERP, TP53 apoptosis effector
Target/Specificity	Perp;
Reconstitution & Storage	PERP antibody can be stored at 4°C for three months and -20°C, stable for up to one year. As with all antibodies care should be taken to avoid repeated freeze thaw cycles. Antibodies should not be exposed to prolonged high temperatures.
Precautions	PERP Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	Perp {ECO:0000312|MGI:MGI:1929938}
Function	Component of intercellular desmosome junctions (PubMed: 15797384). Plays a role in stratified epithelial integrity and cell-cell adhesion by promoting desmosome assembly (PubMed:15797384, PubMed:16485031). Thereby plays a role in barrier function of the skin against infection (PubMed:16485031). Plays a role in mammary epithelial tissue homeostasis and remodeling during and after pregnancy, potentially via its involvement in desmosome cell-cell junctions (PubMed:22515648). Required for tooth enamel development via facilitating desmosome-mediated ameloblast adhesion to the stratum intermedium during the transitional stage of amelogenesis

	(PubMed:21285247). May also play a role in downstream transcriptional regulation of other genes involved in amelogenesis such as AMBN, ENAM, MMP20 and KLK4 (PubMed:21285247). Plays a role as an effector in the TP53-dependent apoptotic pathway (PubMed:10733530). Positively regulates apoptosis in T-helper 17 (Th17) cell populations via caspase- dependent signaling (PubMed:29740445). Promotes neutrophil transepithelial migration in response to chemoattractants such as hepoxilin A3 (HXA3), N-Formylmethionyl-leucyl-phenylalanine (fMLP) and CXCL8/IL-8 (By similarity). May act as a positive regulator of endothelial cell apoptosis in response to blood flow-derived shear stress (By similarity).
Cellular Location	Cell junction, desmosome. Cell membrane; Multi-pass membrane protein. Cytoplasm. Note=Associated with desmosomes (PubMed:15797384). May translocate to the intestinal apical epithelial cell surface via sipA and sctB1/sipC-promoted exocytic translocation following infection by S. Typhimurium (By similarity) {ECO:0000250|UniProtKB:Q96FX8, ECO:0000269|PubMed:15797384}
Tissue Location	Expressed in the stratified squamous skin epithelium of the skin and the tongue, but not in simple epithelia (at protein level) (PubMed:15797384). Expressed in the oral epithelium, tongue epithelium and skin (at protein level) (PubMed:21285247). More abundant in areas of lower flow stress in the inner curvature compared to the outer curvature regions of the aorta (at protein level) (PubMed:27834691). Expressed in luminal cells and myoepithelium cells of the mammary epithelium (at protein level) (PubMed:22515648) Expression increases during the early stages of pregnancy before decreasing before birth, expression continues to be weak during involution which mirrors decreased desmosome abundance and organization at these time points (at protein level) (PubMed:22515648). Expressed by epithelial cells at the mucosal surface in the proximal colon (at protein level) (PubMed:25486861). Expressed in apoptotic cells (PubMed:10733530).

Background

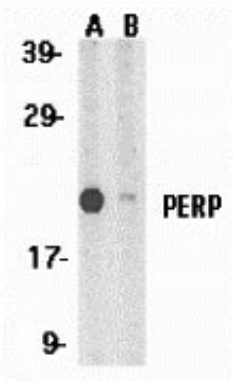
PERP Antibody: The p53 tumor-suppressor gene integrates numerous signals that control cell life and death. Several novel molecules involved in p53 network, including Chk2, p53R2, p53AIP1, Noxa, PIDD, PID/MTA2, MTBP and PERP, were identified and their genes were cloned recently. PERP, also termed PIGPC1 and THW, is a plasma membrane protein. p53 binds to the promoter of PERP and transcriptionally activates PERP gene then the translated PERP protein mediates the p53 induced apoptosis. The expression of PERP causes cell death. PERP is a mediator of p53 induced apoptosis. PERP has sequence similarity to PMP-22/gas3 and is a new member of the PMP-22/gas3 family.

References

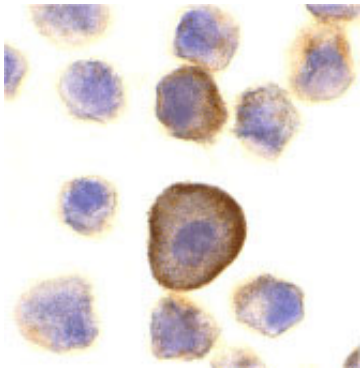
Matsuoka S, Huang M, and Elledge SJ. Linkage of ATM to cell cycle regulation by the Chk2 protein kinase. Science 1998; 282:1893-7.
Tanaka H, Arakawa H, Yamaguchi T, et al. A ribonucleotide reductase gene involved in a p53-dependent cell-cycle checkpoint for DNA damage. Nature 2000; 404:42-9.
Oda E, Ohki R, Murasawa H, et al. Noxa, a BH3-only member of the Bcl-2 family and candidate mediator of p53-induced apoptosis. Science 2000; 288:1053-8.
Oda K, Arakawa H, Tanaka T, et al. p53AIP1, a potential mediator of p53-dependent apoptosis, and its regulation by Ser-46-phosphorylated p53. Cell 2000; 102:849-62.

Images

Western blot analysis of PERP expression in A431 whole



cell lysates in the absence (A) and presence (B) of blocking peptide with PERP antibody at 1 µg/mL.



Immunocytochemistry of PERP in A431 cells with PERP antibody at 10 µg/mL.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.