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Klotho Rabbit pAb

Catalog # AP99211

Product Information

Application	WB, IHC-P, IHC-F, IF
Primary Accession	Q9UEF7
Other Accession	Q9UEF7
Reactivity	Rat, Human, Mouse
Predicted	Pig, Rabbit, Dog, Horse
Host	Rabbit
Clonality	Polyclonal
Calculated MW	116181
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human Klotho
Epitope Specificity	401-500/1012
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SIMILARITY	Belongs to the glycosyl hydrolase 1 family. Klotho subfamily.
SUBUNIT	Belongs to the glycosyl hydrolase 1 family. Klotho subfamily.
Post-translational modifications	N-glycosylated.
DISEASE	Present in cortical renal tubules (at protein level). Soluble peptide is Defects in KL are a cause of hyperphosphatemic familial tumoral calcinosis (HFTC) [MIM:211900]. A severe metabolic disorder that manifests with hyperphosphatemia and massive calcium deposits in the skin and subcutaneous tissues. Some patients manifest recurrent, transient, painful swellings of the long bones associated with the radiographic findings of periosteal reaction and cortical hyperostosis and absence of skin involvement.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	May have weak glycosidase activity towards glucuronylated steroids. However, it lacks essential active site Glu residues at positions 239 and 872, suggesting it may be inactive as a glycosidase in vivo. May be involved in the regulation of calcium and phosphorus homeostasis by inhibiting the synthesis of active vitamin D (By similarity). Essential factor for the specific interaction between FGF23 and FGFR1. The Klotho peptide generated by cleavage of the membrane-bound isoform may be an anti-aging circulating hormone which would extend life span by inhibiting insulin/IGF1 signaling.

Additional Information

Gene ID	9365
Other Names	HFTC3; KLA; alpha-kl; KLOT_HUMAN; KL; 3.2.1.31; KLOT_MOUSE; klotho; alpha-klotho

Dilution	WB=1:500-2000,IHC-P=1:100-500,IHC-F=1:100-500,IF=1:100-500
Storage	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

Protein Information

Name	KL
Function	Exhibits beta-glucuronidase activity in vitro despite lacking canonical catalytic Glu residues of glycosyl hydrolase 1 family enzymes (By similarity). Hydrolyzes steroid beta-D-glucuronides including estradiol-3-beta-D-glucuronide, estrone-3-beta-D-glucuronide and estriol-3-beta-D-glucuronide (By similarity). Essential for the interaction between FGF23 and FGFR1 and for FGF23-mediated regulation of renal vitamin D and phosphate homeostasis (By similarity).
Cellular Location	[Isoform 1]: Cell membrane; Single-pass type I membrane protein. Apical cell membrane {ECO:0000250|UniProtKB:O35082}; Single-pass type I membrane protein {ECO:0000250|UniProtKB:O35082}. Note=Isoform 1 shedding leads to a soluble peptide. {ECO:0000250|UniProtKB:O35082} [Klotho peptide]: Secreted {ECO:0000250|UniProtKB:O35082}
Tissue Location	Present in cortical renal tubules (at protein level). Soluble peptide is present in serum and cerebrospinal fluid Expressed in kidney, placenta, small intestine and prostate. Down- regulated in renal cell carcinomas, hepatocellular carcinomas, and in chronic renal failure kidney.

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