OriGene Technologies, Inc.
9620 Medical Center Drive, Ste 200
Rockville, MD 20850, US
Phone: +1-888-267-4436
https://www.origene.com
techsupport@origene.com
EU: info-de@origene.com
CN: techsupport@origene.cn

Product datasheet for TA388942

KL Rabbit Polyclonal Antibody

Product data:

Product Type:	Primary Antibodies
Applications:	ELISA, WB
Recommended Dilution:	Sandwich ELISA: To detect hKlotho by sandwich ELISA (using 100 ul/well antibody solution) a concentration of 0.25 – 1.0 µg/ml of this antibody is required. This biotinylated polyclonal antibody, in conjunction with ProSci's Polyclonal Anti-Human Klotho as a capture antibody, allows the detection of at least 0.2 – 0.4 ng/well of recombinant hKlotho. Western Blot To detect hKlotho by Western Blot analysis this antibody can be used at a concentration of 0.1 - 0.2 ug/ml. Used in conjunction with compatible secondary reagents the detection limit for recombinant hKlotho is 1.5 - 3.0 ng/lane, under either reducing or non-reducing conditions.
Reactivity:	Human
Host:	Rabbit
Clonality:	Polyclonal
Immunogen:	Produced from sera of rabbits pre-immunized with highly pure (>98%) recombinant hKlotho. Anti-Human Klotho specific antibody was purified by affinity chromatography and then biotinylated.
Concentration:	lot specific
Purification:	Klotho specific antibody was purified by affinity chromatography and then biotinylated
Conjugation:	Biotin
Storage:	Store at -20°C as received.
Stability:	Stable for 12 months from date of receipt.

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Background:

Klotho is a glycosylated protein that plays an important role in the regulation of phosphate and calcium homeostasis. Human Klotho exists in both-membrane bound and secreted forms, and is predominantly expressed in the kidney convoluted tubules, and, to a lesser extent, in the brain, reproductive organs, endocrine glands, urinary bladder, skeletal muscle, placenta, and colon. The full-length transmembrane form has a large extracellular domain composed of two homologous subunits termed KL1 and KL2, which contain 516 and 439 amino acid residues, respectively. The predominant circulating form, which is derived from alternative RNA splicing, contains the KL1 subunit and constitutes the N-terminal sequence of transmembrane Klotho. A third Klotho protein of about 128 kDa has been identified in the blood and cerebrospinal fluid. This circulating protein arises from the action of an as yet unidentified protease, which cleaves transmembrane Klotho just above and/or within the plasma membrane. Klotho has been shown to play a key role in the signaling cascade of fibroblast growth factor-23 (FGF-23), a bone-derived hormone that acts in the kidney to inhibit phosphate reabsorption and vitamin D biosynthesis. Klotho promotes FGF-23 signaling through binding to FGFRI (IIIc) which converts this canonical FGF receptor into a specific receptor for FGF-23. In the absence of Klotho the function of FGF-23 is literally abolished. Recombinant Human Klotho is a glycoprotein of 516 amino acid residues that migrates at an apparent molecular weight of 65-70 kDa by SDS-PAGE analysis under reducing conditions. Recombinant Human Klotho has a calculated molecular weight of 58.6 kDa.