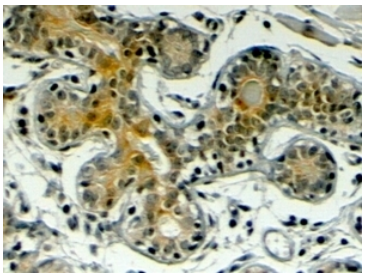
Klotho Antibody / KL Antibody (R34609)

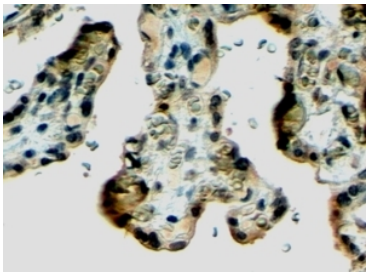
Catalog No.	Formulation	Size
R34609-100UG	0.5 mg/ml in 1X TBS, pH7.3, with 0.5% BSA (US sourced) and 0.02% sodium azide	100 ug

Bulk quote request

Availability	1-3 business days
Species Reactivity	Human
Predicted Reactivity	Mouse, Rat
Format	Antigen affinity purified
Host	Goat
Clonality	Polyclonal (goat origin)
Isotype	Goat Ig
Purity	Antigen affinity
Gene ID	9365
Applications	Immunohistochemistry (FFPE): 4-6ug/ml ELISA (peptide) LOD: 1:4000
Limitations	This Klotho Antibody / KL Antibody is available for research use only.



Klotho Antibody in Human Breast IHC. Immunohistochemistry testing of Klotho Antibody / KL Antibody in FFPE human breast tissue at 4 ug/ml. Heat-induced epitope retrieval was performed by steaming tissue sections in pH 6 citrate buffer followed by HRP-based detection. Cytoplasmic immunoreactivity is observed in glandular epithelial cells within the tested breast tissue.



Klotho Antibody in Human Placenta IHC. Immunohistochemistry testing of Klotho Antibody / KL Antibody in FFPE human placenta tissue at 4 ug/ml. Heat-induced epitope retrieval was performed by steaming tissue sections in pH 6 citrate buffer followed by HRP-based detection. Strong cytoplasmic and membranous immunoreactivity is observed in trophoblastic cells of the placental villi.

Description

Klotho Antibody / KL Antibody recognizes alpha-Klotho, a single-pass transmembrane protein encoded by the KL gene. Klotho was originally identified through studies of aging-related phenotypes and has since emerged as an important regulator of mineral metabolism and kidney physiology. The protein is expressed prominently in the kidney and functions as an essential coreceptor that enables fibroblast growth factor 23 (FGF23) to signal efficiently through FGF receptors. Through this FGF23-Klotho signaling axis, Klotho participates in the regulation of phosphate balance and vitamin D metabolism.

Membrane-bound Klotho associates with FGF receptors and substantially increases their affinity for FGF23, a bone-derived endocrine hormone involved in phosphate homeostasis. FGF23 signaling in Klotho-expressing renal cells promotes phosphate excretion and suppresses production of active vitamin D. Klotho is therefore an important component of the bone-kidney endocrine axis controlling systemic mineral metabolism. Its prominent renal expression has also made Klotho an important research target in studies of kidney function and chronic kidney disease.

Klotho can exist in both membrane-associated and soluble forms. Proteolytic cleavage of the extracellular domain releases soluble Klotho into biological fluids, including blood and urine. Research into soluble Klotho has expanded the biological interest in this protein beyond FGF23 signaling, with reported roles involving ion transport, cellular signaling and oxidative stress. Klotho expression and circulating levels have consequently been investigated in aging, renal disease, mineral metabolism and other physiological and disease-associated processes.

This goat polyclonal antibody was generated against a synthetic peptide corresponding to an internal region of human Klotho. NSJ Bioreagents provides this Klotho Antibody for research into Klotho expression, kidney biology, mineral metabolism and FGF23 signaling. A KL Antibody can support investigation of alpha-Klotho and its roles in phosphate homeostasis, vitamin D regulation and renal physiology.

Explore our Signal Transduction Antibodies page for additional reagents targeting proteins involved in receptor signaling, cellular regulation and signal-responsive pathways.

Application Notes

Optimal dilution of the Klotho Antibody / KL Antibody should be determined by the researcher.

Immunogen

Amino acids KRDDAKYMYYLKK were used as the immunogen for this Klotho antibody.

Storage

Aliquot and store the Klotho antibody at -20oC.

Alternate Names

Klotho antibody, KL antibody, alpha-Klotho antibody, Klotho protein antibody, FGF23 coreceptor antibody

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