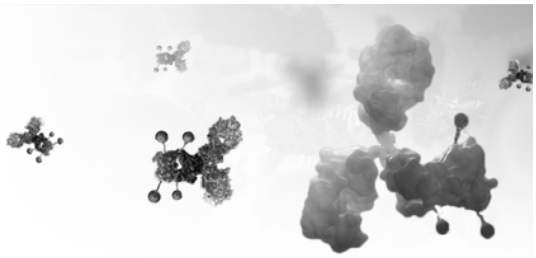

Rat Anti-KL monoclonal antibody, clone LM-345 (CABT-RM148)

This product is for research use only and is not intended for diagnostic use.

PRODUCT INFORMATION

Specificity	Detects Klotho. It targets an epitope with in 107 amino acids from the KL1 domain from the N-terminal region.
Target	KL
Immunogen	GST-tagged recombinant fragment corresponding to 107 amino acids from the extracellular domain from the N-terminal region of human Klotho.
Isotype	IgG2a, κ
Source/Host	Rat
Species Reactivity	Human, Mouse
Clone	LM-345
Purification	Unpurified
Conjugate	unconjugated
Applications	ICC, IHC, IP, WB
Molecular Weight	~130 kDa observed; 116.18 kDa calculated. Uncharacterized bands may be observed in some lysate(s).
Format	Liquid
Size	100 µl
Buffer	ascites(Rat monoclonal antibody)

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Preservative	0.1% sodium azide and 50% glycerol.
Storage	Stable for 1 year at -20°C from date of receipt. Handling Recommendations: Upon receipt and prior to removing the cap, centrifuge the vial and gently mix the solution. Aliquot into microcentrifuge tubes and store at -20°C. Avoid repeated freeze/thaw cycles, which may damage IgG and affect product performance.

BACKGROUND

Introduction	Klotho is encoded by the KL gene in human. Klotho is a homodimeric, highly N-glycosylated, single-pass type I membrane protein that is present in kidney, placenta, small intestine, and prostate tissue. In kidney it is predominantly present in cortical renal tubules. A soluble secreted form (isoform 2, ~ 64 kDa) is present in serum and cerebrospinal fluid. The Klotho peptide generated by cleavage of the membrane-bound isoform (Isoform 1) is considered as an anti-aging circulating hormone that is reported to extend life span by inhibiting insulin/IGF1 signaling. It also acts as a cofactor for interaction of FGF23 with FGF R1, which negatively regulates the activity of 1-alpha-hydroxylase, the rate limiting enzyme in the synthesis of 1,25(OH)2D3. Klotho is synthesized with a signal peptide (aa 1-33), which is subsequently cleaved off to generate the mature form that has an extracellular domain (aa 31-981), a short transmembrane domain (aa 982-1002), and a short cytoplasmic tail (aa 1003-1012). Deficiency of Klotho is reported to shorten life-span in animal models with a myriad of disorders associated with old age, such as arteriosclerosis, osteoporosis, and skin atrophy. Klotho deficient mice also display severe hyperphosphatemia and soft tissue calcification. On the contrary, over-expression of Klotho is shown to extend life-span in murine models by about 30% with side effects, such as mild insulin resistance and enhanced resistance to oxidative stress. Defects in KL gene has been linked to chronic renal failure complications.
Keywords	KL; klotho; alpha-kl; secreted form of Klotho protein

GENE INFORMATION

Entrez Gene ID	9365
UniProt ID	Q9UEF7

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