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ANKH Antibody (C-term)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP9741B

Product Information

Application	WB, IHC-P, FC, E
Primary Accession	Q9HCJ1
Other Accession	P58366, Q9JHZ2
Reactivity	Human, Mouse
Predicted	Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB24439
Calculated MW	54241
Antigen Region	464-492

Additional Information

Gene ID	56172
Other Names	Progressive ankylosis protein homolog, ANK, ANKH, KIAA1581
Target/Specificity	This ANKH antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 464-492 amino acids from the C-terminal region of human ANKH.
Dilution	WB~~1:1000 IHC-P~~1:100~500 FC~~1:10~50 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.05% (V/V) Proclin 300. This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation followed by dialysis against PBS.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	ANKH Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	ANKH {ECO:0000303|PubMed:35147247, ECO:0000312|HGNC:HGNC:15492}
Function	Transports adenosine triphosphate (ATP) and possibly other nucleoside triphosphates (NTPs) from cytosol to the extracellular space. Mainly regulates

	their levels locally in peripheral tissues while playing a minor systemic role. Prevents abnormal ectopic mineralization of the joints by regulating the extracellular levels of the calcification inhibitor inorganic pyrophosphate (PPi), which originates from the conversion of extracellular NTPs to NMPs and PPis by ENPP1 (PubMed:20943778, PubMed:32639996, PubMed:35147247). Regulates the release of the TCA cycle intermediates to the extracellular space, in particular citrate, succinate and malate. Extracellular citrate mostly present in bone tissue is required for osteogenic differentiation of mesenchymal stem cells, stabilization of hydroxyapatite structure and overall bone strength (PubMed:32639996). The transport mechanism remains to be elucidated (Probable).
Cellular Location	Cell membrane; Multi-pass membrane protein
Tissue Location	Found in osteoblasts from mandibular bone and from iliac bone; not detected in osteoclastic cells

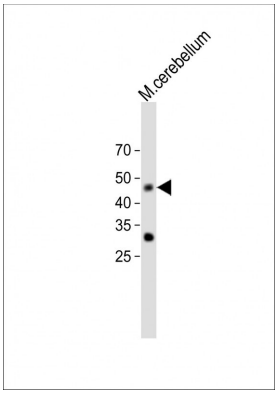
Background

ANKH is a multipass transmembrane protein that is expressed in joints and other tissues and controls pyrophosphate levels in cultured cells. Progressive ankylosis-mediated control of pyrophosphate levels has been suggested as a possible mechanism regulating tissue calcification and susceptibility to arthritis in higher animals.

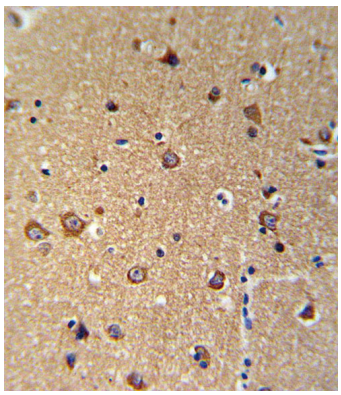
References

Wang, J., et al. J. Rheumatol. 36(6):1265-1272(2009)
Ho, A.M., et al. Science 289(5477):265-270(2000)
Rojas, K., et al. Genomics 62(2):177-183(1999)

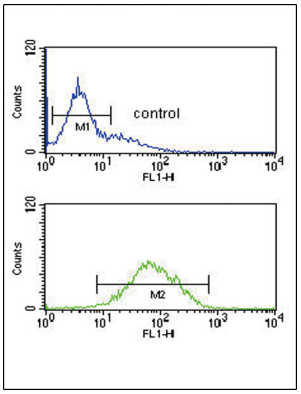
Images



All lanes: Anti-ANKH Antibody (C-term) at 1:2000 dilution + Mouse cerebellum lysate Lysates/proteins at 20 µg per lane. Secondary: Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated (ASP1615) at 1/15000 dilution. Observed band size: 45 KDa Blocking/Dilution buffer: 5% NFDM/TBST.



ANKH Antibody (C-term) (Cat. #AP9741b) IHC analysis in formalin fixed and paraffin embedded brain tissue followed by peroxidase conjugation of the secondary antibody and DAB staining. This data demonstrates the use of the ANKH Antibody (C-term) for immunohistochemistry. Clinical relevance has not been evaluated.



ANKH Antibody (C-term) (Cat. #AP9741b) flow cytometric analysis of K562 cells (bottom histogram) compared to a negative control cell (top histogram).FITC-conjugated goat-anti-rabbit secondary antibodies were used for the analysis.