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KLK4 Antibody

Catalog # ASC11686

Product Information

Application	WB, IF, E, IHC-P
Primary Accession	Q9Y5K2
Other Accession	NP_004908, 89142741
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	27032
Concentration (mg/ml)	1 mg/mL
Conjugate	Unconjugated
Application Notes	KLK4 antibody can be used for detection of KLK4 by Western blot at 1 - 2 g/ml.

Additional Information

Gene ID	9622
Other Names	Kallikrein-4, 3.4.21.-, Enamel matrix serine proteinase 1, Kallikrein-like protein 1, KLK-L1, Prostase, Serine protease 17, KLK4, EMSP1, PRSS17, PSTS
Target/Specificity	KLK4; KLK4 antibody is human specific. At least three isoforms of KLK4 are known to exist.
Reconstitution & Storage	KLK4 antibody can be stored at 4℃ for three months and -20℃, stable for up to one year.
Precautions	KLK4 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	KLK4
Synonyms	EMSP1, PRSS17, PSTS
Function	Has a major role in enamel formation (PubMed: 15235027). Required during the maturation stage of tooth development for clearance of enamel proteins and normal structural patterning of the crystalline matrix (By similarity).
Cellular Location	Secreted.
Tissue Location	Expressed in prostate.

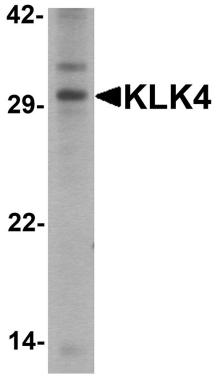
Background

Kallikreins (KLKs) belong to the serine protease family of proteolytic enzymes having diverse physiological functions (1). Kallikrein 4 (KLK4), also known as prostase or EMSP1 (enamel matrix serine protease 1), contains one peptidase S1 domain and the expression in prostate is regulated by hormone (1,2). Many kallikreins are implicated in carcinogenesis and have potential as novel cancer and other disease biomarkers (3). KLK4 may have additional roles such as functioning as one of the two major enamel proteases identified that process enamel matrix proteins. Defects in KLK4 are the cause of amelogenesis imperfecta hypomaturation type 2A1 (AI2A1) (4).

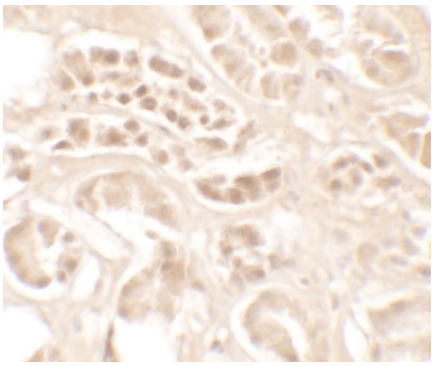
References

Stephenson SA, Verity K, Ashworth LK, et al. Localization of a new prostate-specific antigen-related serine protease gene, KLK4, is evidence for an expanded human kallikrein gene family cluster on chromosome 19q13.3-13.4. J. Biol. Chem. 1999; 274:23210-4.
Myers SA and Clements JA. Kallikrein 4 (KLK4), a new member of the human kallikrein gene family is up-regulated by estrogen and progesterone in the human endometrial cancer cell line, KLE. J. Clin. Endocrinol. Metab. 2001; 86:2323-6.
Kontos CK, Chantzis D, Papadopoulos IN, et al. Kallikrein-related peptidase 4 (KLK4) mRNA predicts short-term relapse in colorectal adenocarcinoma patients. Cancer Lett. 2013; 330:106-12
Shimizu-Okabe C, Yousef GM, Diamandis EP, et al. Expression of the kallikrein gene family in normal and Alzheimer's disease. Neuroreport 2001; 12:27447-51.

Images

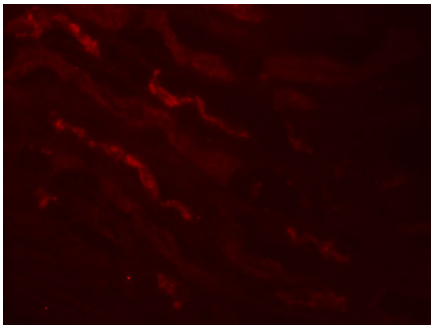


Western blot analysis of KLK4 in human kidney tissue lysate with KLK4 antibody at 1 µg/ml.



Immunohistochemistry of KLK4 in human kidney tissue with KLK4 antibody at 5 µg/mL.

Immunofluorescence of KLK4 in human kidney tissue with KLK4 antibody at 20 µg/mL.



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