10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

KLK8 Rabbit pAb

Catalog # AP98799

Product Information

Application	IHC-P, IHC-F, IF
Primary Accession	O60259
Other Accession	O60259
Reactivity	Rat, Mouse
Predicted	Pig, Human, Dog, Horse
Host	Rabbit
Clonality	Polyclonal
Calculated MW	28048
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human KLK8
Epitope Specificity	51-150/260
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SIMILARITY	Belongs to the peptidase S1 family. Kallikrein subfamily.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	Kallikrein 8 (hK8), also known as neuropsin, brain serine protease 1 (BSP1), tumor associated differentially expressed gene 14 (TADG14), PRSS19, HNP and ovasin, is a trypsin like serine protease. Originally described from mouse brain, KLK8 was implicated in neural plasticity and learning. Kallikrein 8 is thought to be involved in neurite outgrowth and fasciculation during nervous system development. Kallikrein 8 is induced in neurite injury, and Kallikrein 8 has been shown to be elevated in the hippocampus on Alzheimer's patients' brains. Animal models of autoimmune encephalomyelitis (EAE) show elevated Kallikrein 8 production. Kallikrein 8 null mice have aberrant synapses in their hippocampus, compared to wild type mice, and are predisposed to seizures. Kallikrein 8 is thought to regulate the early phase of long-term potentiation (LTP), possibly by cleaving fibronectin and other substrates. Kallikrein 8 is also found in the uterus, where it is hormonally regulated. Cervical cancer cell lines express high levels of Kallikrein 8, and it may be useful as a tumor marker. Kallikrein 8 is not limited to the brain and uterus, as many tissues and cell lines make the protein. Endogenous inhibitors include serine protease inhibitor 3 and protein C inhibitor, although Kallikrein 8 can be found complexed to a number of different protease inhibitors.

Additional Information

Gene ID	11202
Other Names	HNP; NP; NRPN; PRSS19; TADG14; KLK8_HUMAN; KLK8; hK8; Neuropsin (NP); Ovasin; Serine protease 19; Serine protease TADG-14; Tumor-associated differentially expressed gene 14 protein; 3.4.21.118; kallikrein related

	peptidase 8; kallikrein 8 (neuropsin/ovasin)
Dilution	IHC-P=1:100-500,IHC-F=1:100-500,IF=1:200-800
Storage	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

Protein Information

Name	KLK8
Synonyms	NRPN, PRSS19, TADG14
Function	Serine protease which is capable of degrading a number of proteins such as casein, fibrinogen, kininogen, fibronectin and collagen type IV. Also cleaves L1CAM in response to increased neural activity. Induces neurite outgrowth and fasciculation of cultured hippocampal neurons. Plays a role in the formation and maturation of orphan and small synaptic boutons in the Schaffer-collateral pathway, regulates Schaffer-collateral long-term potentiation in the hippocampus and is required for memory acquisition and synaptic plasticity. Involved in skin desquamation and keratinocyte proliferation. Plays a role in the secondary phase of pathogenesis following spinal cord injury.
Cellular Location	Secreted. Cytoplasm. Note=Shows a cytoplasmic distribution in the keratinocytes
Tissue Location	Isoform 1 is predominantly expressed in the pancreas. Isoform 2 is expressed in adult brain and hippocampus Isoform 1 and isoform 2 are found in fetal brain and placenta. Detected in salivary gland, uterus, thymus, breast, testis and kidney but not in spleen, liver, lung or normal ovarian tissue. Displays an 11.5-fold increase in Alzheimer disease hippocampus compared to controls and is overexpressed in some ovarian carcinomas. Expressed at low levels in normal skin while high levels are found in psoriasis vulgaris, seborrheic keratosis, lichen planus and squamous cell carcinoma skin samples. Expressed in the keratinocytes.

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