

NPAS4 Rabbit pAb

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Catalog # AP57475

Product Information

Application	IHC-P, IHC-F, IF
Primary Accession	Q8IUM7
Predicted	Rat, Pig, Human, Mouse, Rabbit, Horse, Sheep
Host	Rabbit
Clonality	Polyclonal
Calculated MW	87117
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human NPAS4
Epitope Specificity	1-100/802
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SUBCELLULAR LOCATION	Nucleus.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	NXF is a member of the basic helix-loop-helix-PER (MIM 602260)-ARNT (MIM 126110)-SIM (see SIM2; MIM 600892) (bHLH-PAS) class of transcriptional regulators, which are involved in a wide range of physiologic and developmental events (Ooe et al., 2004 [PubMed 14701734]).[supplied by OMIM, Mar 2008]

Additional Information

Gene ID	266743
Other Names	Neuronal PAS domain-containing protein 4, Neuronal PAS4, Class E basic helix-loop-helix protein 79, bHLHe79, HLH-PAS transcription factor NXF, PAS domain-containing protein 10, NPAS4 (HGNC:18983)
Dilution	IHC-P=1:100-500,IHC-F=1:100-500,ICC/IF=1:100-500,IF=1:100-500,ELISA=1:500 0-10000
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	NPAS4 (HGNC:18983)
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Function	Transcription factor expressed in neurons of the brain that regulates the excitatory-inhibitory balance within neural circuits and is required for contextual memory in the hippocampus (By similarity). Plays a key role in the structural and functional plasticity of neurons (By similarity). Acts as an early-response transcription factor in both excitatory and inhibitory neurons, where it induces distinct but overlapping sets of late-response genes in these two types of neurons, allowing the synapses that form on inhibitory and excitatory neurons to be modified by neuronal activity in a manner specific to their function within a circuit, thereby facilitating appropriate circuit responses to sensory experience (By similarity). In excitatory neurons, activates transcription of BDNF, which in turn controls the number of GABA-releasing synapses that form on excitatory neurons, thereby promoting an increased number of inhibitory synapses on excitatory neurons (By similarity). In inhibitory neurons, regulates a distinct set of target genes that serve to increase excitatory input onto somatostatin neurons, probably resulting in enhanced feedback inhibition within cortical circuits (By similarity). The excitatory and inhibitory balance in neurons affects a number of processes, such as short-term and long-term memory, acquisition of experience, fear memory, response to stress and social behavior (By similarity). Acts as a regulator of dendritic spine development in olfactory bulb granule cells in a sensory-experience-dependent manner by regulating expression of MDM2 (By similarity). Efficient DNA binding requires dimerization with another bHLH protein, such as ARNT, ARNT2 or BMAL1 (PubMed:14701734). Can activate the CME (CNS midline enhancer) element (PubMed:14701734).
Cellular Location	Nucleus {ECO:0000250 UniProtKB:Q8BGD7, ECO:0000255 PROSITE-ProRule:PRU00981}
Tissue Location	Brain..

Background

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Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.