

NPAS3 Antibody

Catalog # ASC10527

Product Information

Application	WB, IF, E, IHC-P
Primary Accession	Q8IXF0
Other Accession	Q8IXF0 , 38604888
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	100805
Concentration (mg/ml)	1 mg/mL
Conjugate	Unconjugated
Application Notes	NPAS3 antibody can be used for detection of NPAS3 by Western blot at 0.5 - 2 μ g/mL. Antibody can also be used for immunohistochemistry starting at 5 μ g/mL. For immunofluorescence start at 20 μ g/mL.

Additional Information

Gene ID	64067
Other Names	NPAS3 Antibody: MOP6, PASD6, bHLHe12, BHLHE12, MOP6, Neuronal PAS domain-containing protein 3, Basic-helix-loop-helix-PAS protein MOP6, Neuronal PAS3, neuronal PAS domain protein 3
Target/Specificity	NPAS3;
Reconstitution & Storage	NPAS3 antibody can be stored at 4°C for three months and -20°C, stable for up to one year. As with all antibodies care should be taken to avoid repeated freeze thaw cycles. Antibodies should not be exposed to prolonged high temperatures.
Precautions	NPAS3 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	NPAS3
Synonyms	BHLHE12, MOP6, PASD6
Function	May play a broad role in neurogenesis. May control regulatory pathways relevant to schizophrenia and to psychotic illness (By similarity).
Cellular Location	Nucleus {ECO:0000255 PROSITE-ProRule:PRU00981, ECO:0000269 PubMed:12746393}

Tissue Location

Ubiquitously expressed in the adult brain.

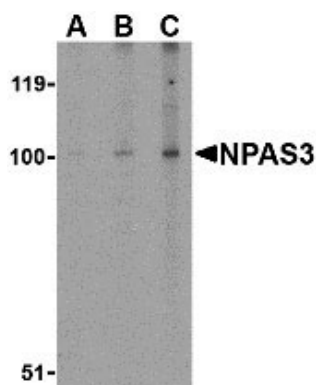
Background

NPAS3 Antibody: Neuronal PAS domain protein 3 (NPAS3) is a brain-enriched basic helix-loop-helix PAS domain transcription factor and is broadly expressed in the developing neuroepithelium and has recently found to be disrupted by genetic translocation in a family affected with schizophrenia. It was recently shown to be involved in the regulation of FGF signaling in the dentate gyrus by controlling the expression of the FGF receptor subtype 1 and in turn neurogenesis emanating from this region. NPAS3-null mice were growth-retarded and displayed brain defects that included reduced size of the anterior hippocampus, hypoplasia of the corpus callosum, and enlargement of the ventricles, as well as several behavioral abnormalities. Furthermore, these NPAS3-null mice also exhibited disruptions in several neurosignaling pathways involving glutamate, dopamine, and serotonin. These results demonstrate the essential role played by NPAS3 during structural and functional brain development. At least three isoforms of NPAS3 are known to exist.

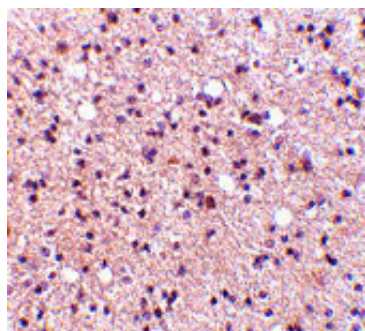
References

Brunskill EW, Witte DP, Shreiner AB et al. Characterization of npas3, a novel basic helix-loop-helix PAS gene expressed in the developing mouse nervous system. *Mech. Dev.*1999; 88:237-41.
Kamnasaran D, Muir WJ, Ferguson-Smith MA, et al. Disruption of the neuronal PAS3 gene in a family affected with schizophrenia. *J. Med. Genet.*40:325-32.
Brunskill EW, Ehrman LA, Williams MT, et al. Abnormal neurodevelopment, neurosignaling and behaviour in Npas3-deficient mice. *Euro. J. Neurosci.*2005; 22:1265-76.

Images

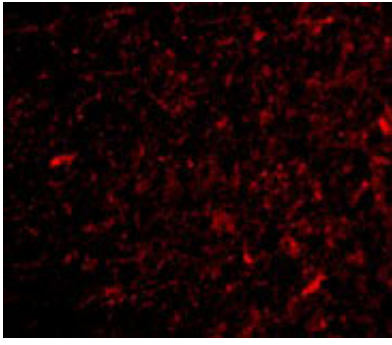


Western blot analysis of NPAS3 in rat brain tissue lysate with NPAS3 antibody at (A) 0.5, (B) 1 and (C) 2 $\mu\text{g/mL}$.



Immunohistochemistry of NPAS3 in human brain tissue with NPAS3 antibody at 5 $\mu\text{g/mL}$.

Immunofluorescence of NPAS3 in Human Brain cells with NPAS3 antibody at 20 $\mu\text{g/mL}$.



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