Datasheet for 600-401-DE3

# NPAS3 Antibody

## Overview

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| **Description:** | Anti-NPAS3 (RABBIT) Antibody - 600-401-DE3 |
| **Item No.:** | 600-401-DE3 |
| **Size:** | 100 µg |
| **Applications:** | ELISA, IF, IHC, WB |
| **Reactivity:** | Human, Mouse, Rat |
| **Host Species:** | Rabbit |

## Product Details

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| **Background:** | 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. |
| **Synonyms:** | NPAS3 Antibody, MOP6, PASD6, bHLHe12, BHLHE12, MOP6, Neuronal PAS domain-containing protein 3, Basic-helix-loop-helix-PAS protein MOP6, Neuronal PAS3 |
| **Host Species:** | Rabbit |
| **Clonality:** | Polyclonal |
| **Format:** | IgG |

## Target Details

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| **Gene Name:** | NPAS3 |
| **Reactivity:** | Human, Mouse, Rat |

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| **Immunogen Type:** | Conjugated Peptide |
| **Immunogen:** | Anti-NPAS3 antibody was prepared from whole rabbit serum produced by repeated immunizations with a 28 amino acid synthetic peptide from near the internal region of human NPAS3. |
| **Purity/Specificity:** | Anti-NPAS3 Antibody was affinity purified from monospecific antiserum by immunoaffinity chromatography. Cross reactivity with NPAS3 from other sources has not been determined. |
| **Relevant Links:** | • UniProtKB - Q8IXF0<br>• GeneID - 64067<br>• NCBI - Q8IXF0 |

## Application Details

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| **Tested Applications:** | ELISA, IF, IHC, WB |
| **Application Note:** | Anti-NPAS3 Antibody has been tested for use in ELISA, Western Blotting, Immunohistochemistry and Immunofluorescence. Specific conditions for reactivity should be optimized by the end user. Expect a band at approximately 101 kDa in Western Blots of specific cell lysates and tissues. |
| **Assay Dilutions:** | All assays should be optimized by the user. Recommended dilutions (if any) may be listed below. |
| **ELISA:** | 1:5,000 - 1:20,000 |
| **IF:** | 20 µg/mL |
| **IHC:** | 5 µg/mL |
| **WB:** | 0.5-2 µg/mL |

## Formulation

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| **Physical State:** | Liquid (sterile filtered) |
| **Concentration:** | 1 mg/mL by UV absorbance at 280 nm |
| **Buffer:** | 0.01 M Sodium Phosphate, 0.25 M Sodium Chloride, pH 7.2 |
| **Preservative:** | 0.02% (w/v) Sodium Azide |
| **Stabilizer:** | None |

## Shipping & Handling

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| **Shipping Condition:** | Dry Ice |

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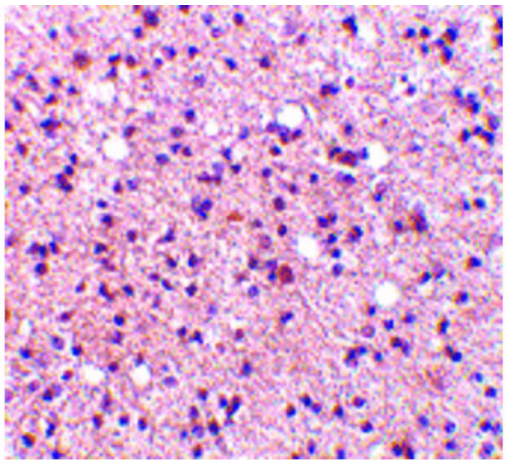
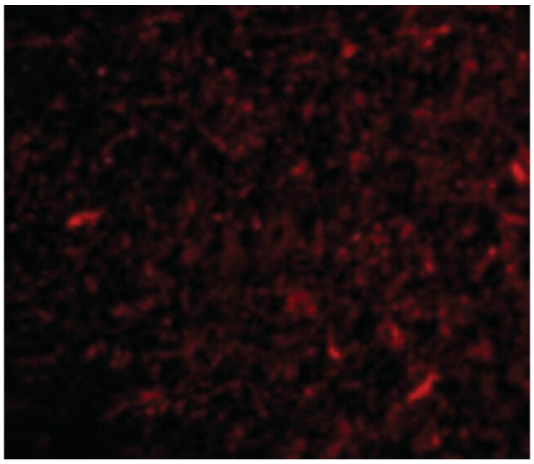
| **Storage Condition:** | Store vial at -20° C prior to opening. Aliquot contents and freeze at -20° C or below for extended storage. Avoid cycles of freezing and thawing. Centrifuge product if not completely clear after standing at room temperature. This product is stable for several weeks at 4° C as an undiluted liquid. Dilute only prior to immediate use. |
| **Expiration:** | Expiration date is one (1) year from date of receipt. |

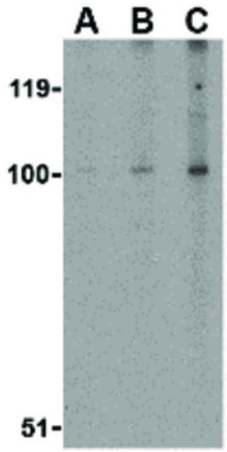
## Images



**Immunohistochemistry**
Immunohistochemistry of NPAS3 antibody. Tissue: Human brain tissue. Fixation: formalin fixed paraffin embedded. Antigen retrieval: not required. Primary antibody: NPAS3 antibody at 5 µg/mL for 1 h at RT. Secondary antibody: Peroxidase rabbit secondary antibody at 1:10,000 for 45 min at RT. Localization: NPAS3 is nuclear and occasionally cytoplasmic. Staining: NPAS3 as precipitated red signal with hematoxylin purple nuclear counterstain.



**Immunofluorescence Microscopy**
Immunofluorescence Microscopy of NPAS3 antibody. Tissue: Human brain cells. Fixation: 0.5% PFA. Antigen retrieval: not required. Primary antibody: NPAS3 antibody at 20 µg/mL for 1 h at RT. Secondary antibody: Fluorescein rabbit secondary antibody at 1:10,000 for 45 min at RT. Staining: NPAS3 as red fluorescent signal.




**Western Blot**

Western Blot of NPAS3 antibody. Lane A: Rat brain tissue lysate at 0.5 µg/mL. Lane B: Rat brain tissue lysate at 1 µg/mL. Lane C: Rat brain tissue lysate at 2 µg/mL. Load: 35 µg per lane. Secondary antibody: Peroxidase rabbit secondary antibody at 1:10,000 for 45 min at RT. Block: 5% BLOTTO overnight at 4°C. Predicted/Observed size: 100.8 kDa, ~100 kDa for NPAS3.

## Disclaimer