

NPAS3 (D-17): sc-50255

BACKGROUND

The Per-Arnt-Sim (PAS) domain is a 270 amino acid motif that mediates associations among various PAS family transcription factors. The PAS family contains neuronal specific transcription factors known as NPAS1, NPAS2 and NPAS3, which are involved the development and maintenance of learning and memory pathways. NPAS1 regulates erythropoietin expression in developing brain. NPAS2, also designated PAS 4/MOP4, associates with MOP3 to activate transcription. NPAS3, which localizes to the nucleus and is ubiquitously expressed in the adult brain, may be involved in neurogenesis and may control regulatory pathways relevant to psychotic illness and to schizophrenia. It regulates tracheal cell fates in the embryo and is necessary for the development of the posterior spiracles and the salivary gland duct. NPAS3 contains one basic helix-loop-helix (bHLH) domain, one PAC (PAS-associated C-terminal) domain, and two PAS (PER-ARNT-SIM) domains. Efficient DNA binding by NPAS2 requires dimerization with another bHLH protein.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: NPAS3 (human) mapping to 14q13.1; Npas3 (mouse) mapping to 12 C1.

SOURCE

NPAS3 (D-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of NPAS3 of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-50255 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

NPAS3 (D-17) is recommended for detection of NPAS3 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000); may cross-react with Ndufa10 in rat.

NPAS3 (D-17) is also recommended for detection of NPAS3 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for NPAS3 siRNA (h): sc-61223, NPAS3 siRNA (m): sc-61224, NPAS3 shRNA Plasmid (h): sc-61223-SH, NPAS3 shRNA Plasmid (m): sc-61224-SH, NPAS3 shRNA (h) Lentiviral Particles: sc-61223-V and NPAS3 shRNA (m) Lentiviral Particles: sc-61224-V.

Molecular Weight of NPAS3: 100.5 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.