SANTA CRUZ BIOTECHNOLOGY, INC.

NPAS1 (N-16): sc-50144

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Members of the bHLH-PAS family are transcription factors that contain a basic helix-loop-helix (bHLH) DNA-recognition motif which is located N-terminal to a PAS domain comprised of two imperfect direct repeats. Human NPAS1 is a deduced 590-amino acid protein which shares 86% sequence homology with mouse NPAS1. In order for NPAS1 to bind DNA efficiently, it must form a dimer with another bHLH protein. NPAS1 interacts with ARNT (aryl hydrocarbon receptor nuclear translocator) and shows predominant expression in brain tissue. NPAS1 is also implicated in the control of regulatory pathways relevant to schizophrenia and to psychotic illness, and may play a role in late central nervous system development by modulating EPO expression in response to cellular oxygen levels. The NPAS1 gene maps to human chromosome 19q13.32.

CHROMOSOMAL LOCATION

Genetic locus: NPAS1 (human) mapping to 19q13.32; Npas1 (mouse) mapping to 7 A2.

SOURCE

NPAS1 (N-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of NPAS1 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-50144 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

RESEARCH USE

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

APPLICATIONS

NPAS1 (N-16) is recommended for detection of NPAS1 (Neuronal PAS domain protein 1) of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], 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).

NPAS1 (N-16) is also recommended for detection of NPAS1 (Neuronal PAS domain protein 1) in additional species, including canine and porcine.

Suitable for use as control antibody for NPAS1 siRNA (h): sc-61221, NPAS1 siRNA (m): sc-61222, NPAS1 shRNA Plasmid (h): sc-61221-SH, NPAS1 shRNA Plasmid (m): sc-61222-SH, NPAS1 shRNA (h) Lentiviral Particles: sc-61221-V and NPAS1 shRNA (m) Lentiviral Particles: sc-61222-V.

Molecular Weight (predicted) of NPAS1: 64 kDa.

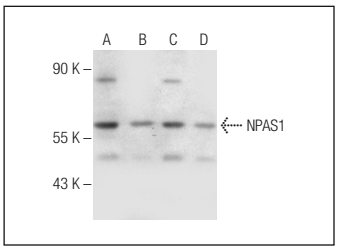
Molecular Weight (observed) of NPAS1: 76 kDa.

Positive Controls: Jurkat nuclear extract: sc-2132, HeLa nuclear extract: sc-2120 or SH-SY5Y nuclear extract: sc-364820.

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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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.

DATA



NPAS1 (N-16): sc-50144. Western blot analysis of NPAS1 expression in Jurkat (**A**), HeLa (**B**), IMR-32 (**C**) and SH-SY5Y (**D**) nuclear extracts.

STORAGE

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

PROTOCOLS

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

MONOS Satisfaction Guaranteed

Try **NPAS1 (F-4): sc-376083**, our highly recommended monoclonal alternative to NPAS1 (N-16).