

p-NFATc4 (Ser 178): sc-68710

BACKGROUND

NFATc4 (nuclear factor of activated T cells, cytoplasmic, calcineurin-dependent 4) is a member of the nuclear factors of activated T cells DNA-binding transcription complex that influences cytokine gene expression, cardiac hypertrophy and adipocyte differentiation. This complex consists of at least two components: a cytosolic component that translocates to the nucleus upon T cell receptor (TCR) stimulation and an inducible nuclear component. Other members of this family participate in the formation of this complex. NFATc4 plays a role in the inducible expression of cytokine genes in T cells, including the induction of IL-2 and IL-4. p38 MAP kinase phosphorylates multiple residues, including Serine 178, in the NFAT homology domain of NFATc4.

CHROMOSOMAL LOCATION

Genetic locus: NFATC4 (human) mapping to 14q12; Nfatc4 (mouse) mapping to 14 C3.

SOURCE

p-NFATc4 (Ser 178) is a rabbit polyclonal antibody raised against a short amino acid sequence containing Ser 178 phosphorylated NFATc4 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-68710 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

p-NFATc4 (Ser 178) is recommended for detection of Ser 178 phosphorylated NFATc4 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

p-NFATc4 (Ser 178) is also recommended for detection of correspondingly phosphorylated NFATc4 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for NFATc4 siRNA (h): sc-38115, NFATc4 siRNA (m): sc-38116, NFATc4 shRNA Plasmid (h): sc-38115-SH, NFATc4 shRNA Plasmid (m): sc-38116-SH, NFATc4 shRNA (h) Lentiviral Particles: sc-38115-V and NFATc4 shRNA (m) Lentiviral Particles: sc-38116-V.

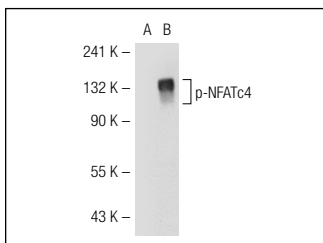
Molecular Weight of p-NFATc4: 140-160 kDa.

Positive Controls: NFATc4 (h): 293T Lysate: sc-116481, Jurkat whole cell lysate: sc-2204 or Jurkat nuclear extract: sc-2132.

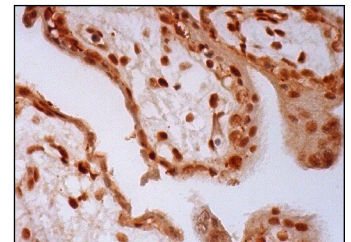
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto B Blocking Reagent: sc-2335 (use 50 mM NaF, sc-24988, as diluent), Western Blotting Luminol Reagent: sc-2048 and Lambda Phosphatase: sc-200312A. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941. 4) Immunohistochemistry: use ImmunoCruz™: sc-2051 or ABC: sc-2018 rabbit IgG Staining Systems.

DATA



p-NFATc4 (Ser 178): sc-68710. Western blot analysis of NFATc4 phosphorylation in non-transfected: sc-117752 (A) and human NFATc4 transfected: sc-116481 (B) 293T whole cell lysates.



p-NFATc4 (Ser 178): sc-68710. Immunoperoxidase staining of formalin fixed, paraffin-embedded human placenta tissue showing cytoplasmic and nuclear staining of trophoblastic cells.

SELECT PRODUCT CITATIONS

- Zou, J., et al. 2013. Fenofibrate ameliorates cardiac hypertrophy by activation of peroxisome proliferator-activated receptor- α partly via preventing p65-NF κ B binding to NFATc4. *Mol. Cell. Endocrinol.* 370: 103-112.

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.