

ZNF592 (N-19): sc-244807

BACKGROUND

Zinc-finger proteins contain DNA-binding domains and have a wide variety of functions, most of which encompass some form of transcriptional activation or repression. The majority of zinc-finger proteins contain a Krüppel-type DNA binding domain and a KRAB domain, which is thought to interact with KAP1, thereby recruiting histone modifying proteins. ZNF592 (zinc finger protein 592), also known as CAMOS or SCAR5, is a 1,267 amino acid protein that contains 13 C₂H₂-type zinc fingers and belongs to the Krüppel C₂H₂-type zinc-finger protein family. Localizing to the nucleus, ZNF592 is widely expressed, with high levels of expression found in skeletal muscle, fetal tissue, and across the central nervous system. ZNF592 becomes phosphorylated upon DNA damage, and defects to ZNF592 have been linked to spinocerebellar ataxia autosomal recessive type 5 (SCAR5). SCAR5 is characterized by poor coordination, developmental delay, speech defects and cerebellar spastic ataxia.

REFERENCES

- Nagase, T., et al. 1996. Prediction of the coding sequences of unidentified human genes. VI. The coding sequences of 80 new genes (KIAA0201-KIAA0280) deduced by analysis of cDNA clones from cell line KG-1 and brain. *DNA Res.* 3: 321-329, 341-354.
- Delague, V., et al. 2002. A new autosomal recessive non-progressive congenital cerebellar ataxia associated with mental retardation, optic atrophy, and skin abnormalities (CAMOS) maps to chromosome 15q24-q26 in a large consanguineous lebanese druze family. *Neurogenetics* 4: 23-27.
- Olsen, J.V., et al. 2006. Global, *in vivo*, and site-specific phosphorylation dynamics in signaling networks. *Cell* 127: 635-648.
- Matsuoka, S., et al. 2007. ATM and ATR substrate analysis reveals extensive protein networks responsive to DNA damage. *Science* 316: 1160-1166.
- Dephoure, N., et al. 2008. A quantitative atlas of mitotic phosphorylation. *Proc. Natl. Acad. Sci. USA* 105: 10762-10767.
- Nicolas, E., et al. 2010. CAMOS, a nonprogressive, autosomal recessive, congenital cerebellar ataxia, is caused by a mutant zinc-finger protein, ZNF592. *Eur. J. Hum. Genet.* 18: 1107-1113.
- Huang, J., et al. 2010. Genetic and epigenetic silencing of SCAR5 may contribute to human hepatocellular carcinoma by activating FAK signaling. *J. Clin. Invest.* 120: 223-241.
- Arking, D.E., et al. 2010. Genome-wide association study identifies GPC5 as a novel genetic locus protective against sudden cardiac arrest. *PLoS ONE* 5: e9879.

CHROMOSOMAL LOCATION

Genetic locus: ZNF592 (human) mapping to 15q25.3; Zfp592 (mouse) mapping to 7 D3.

SOURCE

ZNF592 (N-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of ZNF592 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-244807 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

ZNF592 (N-19) is recommended for detection of ZNF592 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); non cross-reactive with other ZNF family members.

ZNF592 (N-19) is also recommended for detection of ZNF592 in additional species, including equine, canine and bovine.

Suitable for use as control antibody for ZNF592 siRNA (h): sc-90297, ZNF592 siRNA (m): sc-155757, ZNF592 shRNA Plasmid (h): sc-90297-SH, ZNF592 shRNA Plasmid (m): sc-155757-SH, ZNF592 shRNA (h) Lentiviral Particles: sc-90297-V and ZNF592 shRNA (m) Lentiviral Particles: sc-155757-V.

Molecular Weight of ZNF592: 138 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.