SANTA CRUZ BIOTECHNOLOGY, INC.

ELFN1 (N-12): sc-136660

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

ELFN1 (extracellular leucine-rich repeat and fibronectin type III domain containing 1), also known as PPP1R28 (protein phosphatase 1 regulatory subunit 28), is a 806 amino acid single-pass membrane protein that interacts with PPP1CA. The ELFN1 protein inhibits phosphatase activity of protein phosphatase one (PP1) complexes. ELFN1 contains one fibronectin type-III domain, five LRR (leucine-rich) repeats and one LRRCT domain. The ELFN1 gene is conserved in chimpanzee, canine, bovine, mouse, rat, chicken and zebrafish, and maps to human chromosome 7p22.3. Chromosome 7 is about 158 milllion bases long, encodes over 1,000 genes and makes up about 5% of the human genome. Chromosome 7 has been linked to osteogenesis imperfecta, Pendred syndrome, lissencephaly, citrullinemia and Shwachman-Diamond syndrome. The deletion of a portion of the q arm of chromosome 7 is associated with Williams-Beuren syndrome, a condition characterized by mild mental retardation, an unusual comfort and friendliness with strangers and an elfin appearance. Deletions of portions of the q arm of chromosome 7 are also seen in a number of myeloid disorders including cases of acute myelogenous leukemia and myelodysplasia.

REFERENCES

1. Tsipouras, P., et al. 1983. Restriction fragment length polymorphism associated with the pro α 2(I) gene of human type I procollagen. Application to a family with an autosomal dominant form of osteogenesis imperfecta. J. Clin. Invest. 72: 1262-1267.
2. Liang, H., et al. 1998. Molecular anatomy of chromosome 7q deletions in myeloid neoplasms: evidence for multiple critical loci. Proc. Natl. Acad. Sci. USA 95: 3781-3785.
3. Hillier, L.W., et al. 2003. The DNA sequence of human chromosome 7. Nature 424: 157-164.
4. Eckert, M.A., et al. 2006. The neurobiology of Williams syndrome: cascading influences of visual system impairment? Cell. Mol. Life Sci. 63: 1867-1875.
5. Reiner, O., et al. 2006. Lissencephaly 1 linking to multiple diseases: mental retardation, neurodegeneration, schizophrenia, male sterility, and more. Neuromolecular Med. 8: 547-565.

CHROMOSOMAL LOCATION

Genetic locus: ELFN1 (human) mapping to 7p22.3; Elfn1 (mouse) mapping to 5 G2.

SOURCE

ELFN1 (N-12) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping within an N-terminal extracellular domain of ELFN1 of human origin.

PRODUCT

Each vial contains 100 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-136660 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

ELFN1 (N-12) is recommended for detection of ELFN1 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:50-1:500), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:25, dilution range 1:25-1:250) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

ELFN1 (N-12) is also recommended for detection of ELFN1 in additional species, including canine, bovine and porcine.

Suitable for use as control antibody for ELFN1 siRNA (h): sc-89382, ELFN1 siRNA (m): sc-144631, ELFN1 shRNA Plasmid (h): sc-89382-SH, ELFN1 shRNA Plasmid (m): sc-144631-SH, ELFN1 shRNA (h) Lentiviral Particles: sc-89382-V and ELFN1 shRNA (m) Lentiviral Particles: sc-144631-V.

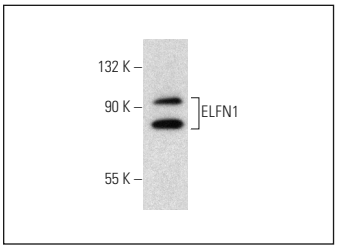
Molecular Weight of ELFN1: 88 kDa.

Positive Controls: K-562 whole cell lysate: sc-2203.

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 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 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.

DATA



ELFN1 (N-12): sc-136660. Western blot analysis of ELFN1 expression in K-562 whole cell lysate.

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.