SANTA CRUZ BIOTECHNOLOGY, INC.

CGGBP1 (C-17): sc-102433

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Fragile X syndrome is the most frequent form of inherited mental retardation and is the result of transcriptional silencing of the FMR1 (fragile X mental retardation) gene on the X chromosome. The FMR1 gene contains a distinct CpG dinucleotide repeat located in the 5'-untranslated region of the gene which, in fragile X syndrome, is substantially amplified and subject to extensive methylation and enhanced transcriptional silencing. CGGBP1 (CGG triplet repeat binding protein 1), also known as CGGBP or p20-CGGBP, is a 167 amino acid nuclear protein that influences FMR1 expression. Highly expressed in thymus, placenta, lymph nodes, cerebral cortex and cerebellum, CGGBP1 binds to the 5'-$(CGG)_n$-3' repeat in the promotor of the FMR1 gene and positively regulates expression of the FMR1 protein. Binding of CGGBP1 to the FMR1 promotor is inhibited by cytosine-specific DNA methylation of the protein binding motif, suggesting that CGGBP1 activity is silenced in FMR1-affected individuals.

REFERENCES

1. Verkerk, A.J., et al. 1991. Identification of a gene (FMR1) containing a CGG repeat coincident with a breakpoint cluster region exhibiting length variation in fragile X syndrome. Cell 65: 905-914.
2. Pieretti, M., et al. 1991. Absence of expression of the FMR1 gene in fragile X syndrome. Cell 66: 817-22.
3. Zhang, Y., et al. 1995. The fragile X mental retardation syndrome protein interacts with novel homologs FXR1 and FXR2. EMBO J. 14: 5358-5366.
4. Deissler, H., et al. 1996. Purification of nuclear proteins from human HeLa cells that bind specifically to the unstable tandem repeat $(CGG)_n$ in the human FMR1 gene. J. Biol. Chem. 271: 4327-4334.
5. Eberhart, D.E., et al. 1996. The fragile X mental retardation protein is a ribonucleoprotein containing both nuclear localization and nuclear export signals. Hum. Mol. Genet. 5: 1083-1091.

CHROMOSOMAL LOCATION

Genetic locus: CGGBP1 (human) mapping to 3p11.1; Cggbp1 (mouse) mapping to 16 C1.3.

SOURCE

CGGBP1 (C-17) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping at the C-terminus of CGGBP1 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. Also available as TransCruz reagent for Gel Supershift and ChIP applications, sc-102433 X, 200 µg/0.1 ml.

Blocking peptide available for competition studies, sc-102433 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

CGGBP1 (C-17) is recommended for detection of CGGBP1 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).

CGGBP1 (C-17) is also recommended for detection of CGGBP1 in additional species, including equine, canine and bovine.

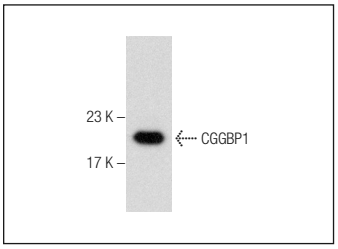
Suitable for use as control antibody for CGGBP1 siRNA (h): sc-78374, CGGBP1 siRNA (m): sc-142304, CGGBP1 shRNA Plasmid (h): sc-78374-SH, CGGBP1 shRNA Plasmid (m): sc-142304-SH, CGGBP1 shRNA (h) Lentiviral Particles: sc-78374-V and CGGBP1 shRNA (m) Lentiviral Particles: sc-142304-V.

CGGBP1 (C-17) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

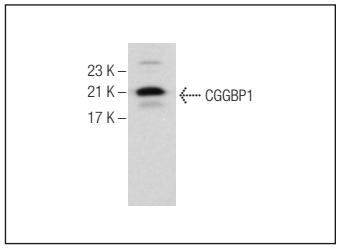
Molecular Weight of CGGBP1: 20 kDa.

Positive Controls: MDA-MB-435S whole cell lysate: sc-364184, K-562 whole cell lysate: sc-2203 or CCRF-CEM nuclear extract: sc-2146.

DATA



CGGBP1 (C-17): sc-102433. Western blot analysis of CGGBP1 expression in CCRF-CEM nuclear extract.



CGGBP1 (C-17): sc-102433. Western blot analysis of CGGBP1 expression in MDA-MB-435S 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.

PROTOCOLS

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

MONOS Satisfaction Guaranteed

Try **CGGBP1 (G-12): sc-398347** or **CGGBP1 (G-8): sc-376482**, our highly recommended monoclonal alternatives to CGGBP1 (C-17).