SANTA CRUZ BIOTECHNOLOGY, INC.

CGBP (N-21): sc-12336

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The human genome contains discrete clusters of unmethylated CpG dinucleotides, called CpG islands, which contribute to the modulation of gene expression by binding transcription factors. Human CpG binding protein (CGBP), detected in K-562 cells, is a widely expressed member of CpG binding proteins that requires the CpG dinucleotide to bind DNA. CGBP binds specifically to unmethylated CpG motifs and functions as a transcriptional activator. The CXXC domain of CGBP is conserved in DNA methyltransferase, human trithorax, and methyl-CpG binding protein (MBP), and is involved in DNA-binding. CGBP also contains several domains implicated in protein-protein interactions, such as a coiled-coil domain, and two PHD finger domains, the function of which remains to be determined.

CHROMOSOMAL LOCATION

Genetic locus: CXXC1 (human) mapping to 18q21.1; Cxxc1 (mouse) mapping to 18 E2.

SOURCE

CGBP (N-21) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of CGBP 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. Also available as TransCruz reagent for Gel Supershift and ChIP applications, sc-12336 X, 200 µg/0.1 ml.

Blocking peptide available for competition studies, sc-12336 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

CGBP (N-21) is recommended for detection of CGBP 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), flow cytometry (1 µg per 1 x 10^6 cells) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

CGBP (N-21) is also recommended for detection of CGBP in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for CGBP siRNA (h): sc-35055, CGBP siRNA (m): sc-35056, CGBP shRNA Plasmid (h): sc-35055-SH, CGBP shRNA Plasmid (m): sc-35056-SH, CGBP shRNA (h) Lentiviral Particles: sc-35055-V and CGBP shRNA (m) Lentiviral Particles: sc-35056-V.

CGBP (N-21) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

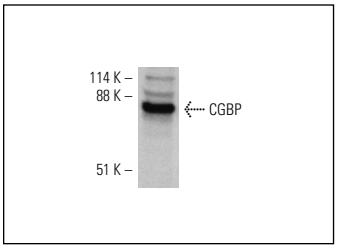
Molecular Weight of CGBP: 88 kDa.

Positive Controls: NIH/3T3 nuclear extract: sc-2138, Jurkat nuclear extract: sc-2132 or K-562 nuclear extract: sc-2130.

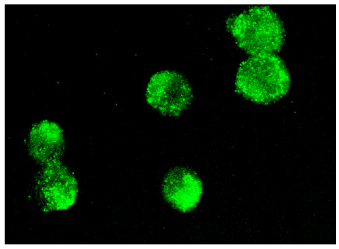
RECOMMENDED SECONDARY REAGENTS

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



CGBP (N-21): sc-12336. Western blot analysis of CGBP expression in NIH/3T3 nuclear extract.



CGBP (N-21): sc-12336. Immunofluorescence staining of methanol-fixed K-562 cells showing nuclear staining.

SELECT PRODUCT CITATIONS

1. Cheray, M., et al. 2014. Specific inhibition of DNMT1/CFP1 reduces cancer phenotypes and enhances chemotherapy effectiveness. Epigenomics 6: 267-275.

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.