

BEND4 (T-12): sc-137377

BACKGROUND

BEND4 (BEN domain-containing protein 4) is a 530 amino acid protein that contains a BEN domain. BEND4 exists as five alternatively spliced isoforms and is considered a complete proteome. BEN domain mediates protein–DNA and protein–protein interactions during chromatin organization and transcription. BEN domain may play a role in organization of viral DNA during replication or transcription. The BEND4 gene maps to human chromosome 4p13. Representing approximately 6% of the human genome, chromosome 4 contains nearly 900 genes. Chromosome 4 reportedly contains the largest gene deserts (regions of the genome with no protein encoding genes) and has one of the two lowest recombination frequencies of the human chromosomes. Notably, the Huntingtin gene, which is found to encode an expanded glutamine tract in cases of Huntington's disease, is on chromosome 4. FGFR-3 is also encoded on chromosome 4 and has been associated with thanatophoric dwarfism, achondroplasia, Muenke syndrome and bladder cancer.

REFERENCES

1. Strausberg, R.L., et al. 2002. Generation and initial analysis of more than 15,000 full-length human and mouse cDNA sequences. *Proc. Natl. Acad. Sci. USA* 99: 16899-16903.
2. Ota, T., et al. 2004. Complete sequencing and characterization of 21,243 full-length human cDNAs. *Nat. Genet.* 36: 40-45.
3. Hillier, L.W., et al. 2005. Generation and annotation of the DNA sequences of human chromosomes 2 and 4. *Nature* 434: 724-731.
4. Cowan, C.M. and Raymond, L.A. 2006. Selective neuronal degeneration in Huntington's disease. *Curr. Top. Dev. Biol.* 75: 25-71.
5. Stack, E.C., et al. 2007. Neuroprotective effects of synaptic modulation in Huntington's disease R6/2 mice. *J. Neurosci.* 27: 12908-12915.
6. Abhiman, S., et al. 2008. BEN: a novel domain in chromatin factors and DNA viral proteins. *Bioinformatics* 24: 458-461.
7. SWISS-PROT/TrEMBL (Q6ZU67). World Wide Web URL: <http://www.uniprot.org/uniprot/Q6ZU67>

CHROMOSOMAL LOCATION

Genetic locus: BEND4 (human) mapping to 4p13; Bend4 (mouse) mapping to 5 C3.1.

SOURCE

BEND4 (T-12) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping within an internal region of BEND4 of human origin.

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.

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-137377 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

BEND4 (T-12) is recommended for detection of BEND4 isoforms 1-3 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); non cross-reactive with other CCDC family members.

BEND4 (T-12) is also recommended for detection of BEND4 isoforms 1-3 in additional species, including equine, canine and avian.

Suitable for use as control antibody for BEND4 siRNA (h): sc-88865, BEND4 siRNA (m): sc-144380, BEND4 shRNA Plasmid (h): sc-88865-SH, BEND4 shRNA Plasmid (m): sc-144380-SH, BEND4 shRNA (h) Lentiviral Particles: sc-88865-V and BEND4 shRNA (m) Lentiviral Particles: sc-144380-V.

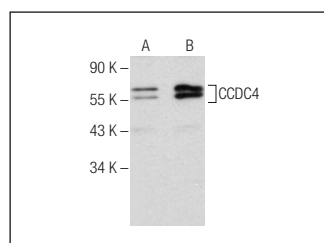
Molecular Weight of BEND4: 58 kDa.

Positive Controls: BEND4 (h): 293T Lysate: sc-128265 or BEND4 (h): 293T Lysate: sc-128264.

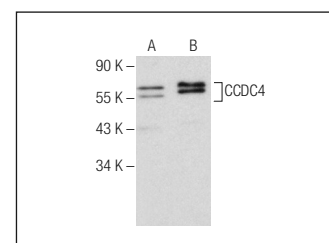
RECOMMENDED SECONDARY REAGENTS

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



BEND4 (T-12): sc-137377. Western blot analysis of CCDC4 expression in non-transfected: sc-117752 (A) and human CCDC4 transfected: sc-128265 (B) 293T whole cell lysates.



BEND4 (T-12): sc-137377. Western blot analysis of CCDC4 expression in non-transfected: sc-117752 (A) and human CCDC4 transfected: sc-128264 (B) 293T whole cell lysates.

RESEARCH USE

For research use only, not for use in diagnostic procedures.