

BCMP1 (E-12): sc-161381

BACKGROUND

BCMP1 (brain cell membrane protein 1), also known as TM4SF10 or TMEM47, is a 181 amino acid multi-pass membrane protein belonging to the PMP22/EMP/claudin protein family. Localized to the endoplasmic reticulum, BCMP1 is abundantly expressed in the brain. The gene encoding BCMP1 is located on human chromosome X and mutations in this gene may be associated with impaired brain function leading to mental retardation. Human chromosome X contains nearly 153 million base pairs and houses over 1,000 genes. In conjunction with chromosome Y, chromosome X is responsible for sex determination, as an X and a Y chromosome lead to normal male development, while two copies of an X chromosome lead to normal female development. There are a number of conditions related to an abnormal number and combination of sex chromosomes, some of which include Turner's syndrome, color blindness, hemophilia and Duchenne muscular dystrophy.

REFERENCES

1. Givens, J.R., et al. 1975. Features of Turner's syndrome in women with polycystic ovaries. *Obstet. Gynecol.* 45: 619-624.
2. Christophe-Hobertus, C., et al. 2001. Identification of the gene encoding brain cell membrane protein 1 (BCMP1), a putative four-transmembrane protein distantly related to the peripheral myelin protein 22/epithelial membrane proteins and the claudins. *BMC Genomics* 2: 3.
3. Bernardino-Sgheri, J., et al. 2002. Overall DNA methylation and chromatin structure of normal and abnormal X chromosomes. *Cytogenet. Genome Res.* 99: 85-91.
4. Simske, J.S., et al. 2003. The cell junction protein VAB-9 regulates adhesion and epidermal morphology in *C. elegans*. *Nat. Cell Biol.* 5: 619-625.
5. Muntoni, F., et al. 2003. Dystrophin and mutations: one gene, several proteins, multiple phenotypes. *Lancet. Neurol.* 2: 731-740.
6. Cantagrel, V., et al. 2004. Disruption of a new X linked gene highly expressed in brain in a family with two mentally retarded males. *J. Med. Genet.* 41: 736-742.
7. Christophe-Hobertus, C., et al. 2004. TM4SF10 gene sequencing in XLMR patients identifies common polymorphisms but no disease-associated mutation. *BMC Med. Genet.* 5: 22.

CHROMOSOMAL LOCATION

Genetic locus: TMEM47 (human) mapping to Xp21.1; Tmem47 (mouse) mapping to X B.

SOURCE

BCMP1 (E-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of BCMP1 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-161381 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

BCMP1 (E-12) is recommended for detection of BCMP1 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).

BCMP1 (E-12) is also recommended for detection of BCMP1 in additional species, including canine, bovine, porcine and avian.

Suitable for use as control antibody for BCMP1 siRNA (h): sc-91124, BCMP1 siRNA (m): sc-141678, BCMP1 shRNA Plasmid (h): sc-91124-SH, BCMP1 shRNA Plasmid (m): sc-141678-SH, BCMP1 shRNA (h) Lentiviral Particles: sc-91124-V and BCMP1 shRNA (m) Lentiviral Particles: sc-141678-V.

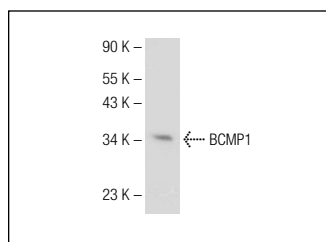
Molecular Weight of BCMP1: 20 kDa.

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 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



BCMP1 (E-12): sc-161381. Western blot analysis of BCMP1 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.

PROTOCOLS

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