



Microcephalin (H-145): sc-134490

BACKGROUND

Microcephalin (MCPH1, BRCT-repeat inhibitor of TERT expression 1, BRIT1) modulates brain size and has been proliferating under strong positive selection for several thousand years, although the nature of the positive selection is poorly understood. Human Microcephalin contains three BRCA1 C-terminal (BRCT) domains and shares 57% identity with its mouse ortholog, the most conserved regions being BRCT domains where there is 80% identity. Predominant expression of human Microcephalin is observed in fetal brain, liver and kidney tissues and is expressed during neurogenesis in mice. Microcephalin displays significantly higher rates of protein evolution in primates than in rodents; this trend is most noticeable for the subset of genes associated with nervous system development. Microcephalin has a very young, single nucleotide, polymorphism haplotype associated with modern humans; this gene is presumably still evolving in *Homo sapiens*. It functions in DNA damage response and regulation of cell cycle checkpoints.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: MCPH1 (human) mapping to 8p23.1; Mcph1 (mouse) mapping to 8 A1.3.

RESEARCH USE

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

SOURCE

Microcephalin (H-145) is a rabbit polyclonal antibody raised against amino acids 691-835 mapping at the C-terminus of Microcephalin 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.

Available as TransCruz reagent for Gel Supershift and ChIP applications, sc-134490 X, 200 µg/0.1 ml.

APPLICATIONS

Microcephalin (H-145) is recommended for detection of Microcephalin of human and, to a lesser extent, mouse and rat 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).

Suitable for use as control antibody for Microcephalin siRNA (h): sc-61042, Microcephalin siRNA (m): sc-61043, Microcephalin shRNA Plasmid (h): sc-61042-SH, Microcephalin shRNA Plasmid (m): sc-61043-SH, Microcephalin shRNA (h) Lentiviral Particles: sc-61042-V and Microcephalin shRNA (m) Lentiviral Particles: sc-61043-V.

Microcephalin (H-145) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

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.

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.