

MZT2A/B (S-16): sc-139248

BACKGROUND

MZT2A and MZT2B, also known as FAM128A and FAM128B or Mitotic-spindle organizing protein 2A/2B, are both 158 amino acid proteins in the MOZART2 family. The MZT2A and MZT2B genes are located on chromosome 2q21.1. The second largest human chromosome, 2 consists of 237 million bases encoding over 1,400 genes and making up approximately 8% of the human genome. A number of genetic diseases are linked to genes on chromosome 2. Harlequin ichthyosis, a rare and morbid skin deformity, is associated with mutations in the ABCA12 gene. The lipid metabolic disorder sitosterolemia is associated with ABCG5 and ABCG8. An extremely rare recessive genetic disorder, Alström syndrome is due to mutations in the ALMS1 gene. Interestingly, chromosome 2 contains what appears to be a vestigial second centromere and vestigial telomeres which gives credence to the hypothesis that human chromosome 2 is the result of an ancient fusion of two ancestral chromosomes seen in modern form today in apes.

REFERENCES

1. Ijdo, J.W., et al. 1991. Origin of human chromosome 2: an ancestral telomere-telomere fusion. *Proc. Natl. Acad. Sci. USA* 88: 9051-9055.
2. Avarello, R., et al. 1992. Evidence for an ancestral alphoid domain on the long arm of human chromosome 2. *Hum. Genet.* 89: 247-249.
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. Thomas, A.C., et al. 2006. ABCA12 is the major harlequin ichthyosis gene. *J. Invest. Dermatol.* 126: 2408-2413.
5. Akiyama, M., et al. 2007. Compound heterozygous ABCA12 mutations including a novel nonsense mutation underlie harlequin ichthyosis. *Dermatology* 215: 155-159.
6. Marshall, J.D., et al. 2007. Alström syndrome. *Eur. J. Hum. Genet.* 15: 1193-1202.

CHROMOSOMAL LOCATION

Genetic locus: MZT2B/MZT2A (human) mapping to 2q21.1; Mzt2 (mouse) mapping to 16 A2.

SOURCE

MZT2A/B (S-16) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping within an internal region of MZT2B 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.

Blocking peptide available for competition studies, sc-139248 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

APPLICATIONS

MZT2A/B (S-16) is recommended for detection of MZT2A of human origin, MZT2B of human and rat origin and Mzt2 of mouse 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).

MZT2A/B (S-16) is also recommended for detection of MZT2A and MZT2B in additional species, including canine and porcine.

Suitable for use as control antibody for Mzt2 siRNA (m): sc-108744, Mzt2 shRNA Plasmid (m): sc-108744-SH and Mzt2 shRNA (m) Lentiviral Particles: sc-108744-V.

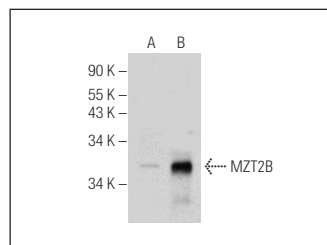
Molecular Weight of MZT2A/B: 16 kDa.

Positive Controls: MZT2 (h): 293T Lysate: sc-113419.

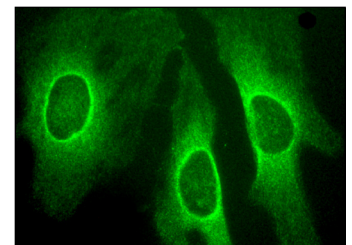
RECOMMENDED SECONDARY REAGENTS

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



MZT2A/B (S-16): sc-139248. Western blot analysis of MZT2B expression in non-transfected: sc-117752 (A) and human MZT2B transfected: sc-113419 (B) 293T whole cell lysates.



MZT2A/B (S-16): sc-139248. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization.

RESEARCH USE

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

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Try **MZT2A/B (B-10): sc-514516**, our highly recommended monoclonal alternative to MZT2A/B (S-16).