BACKGROUND

YT521-B (YTH domain-containing protein 1), also known as YT521, is a 727 amino acid nuclear protein that localizes to the novel subnuclear structure of YT bodies and is the human homolog of the mouse gene, Ythdc1. Ubiquitously expressed, YT521-B may be part of a signal transduction pathway that influences splice site selection. YT521-B shuttles between the nucleus and cytosol, where it can be phosphorylated by c-Src or Fyn. Tyrosine phosphorylation by c-Abl causes dispersion of YT521-B from YT bodies to the nucleoplasm. Tyrosine phosphorylation also promotes sequestration of YT521-B in an insoluble nuclear form, which abolishes the ability of YT521-B to change alternative splice sites. YT521-B is considered to be a candidate for a role in a gene expression model of the pathogenesis of EDMD (Emery-Dreifuss muscular dystrophy), a type of muscular dystrophy primarily affecting voluntary muscles. YT521-B exists as two isoforms due to alternative splicing events.

REFERENCES


CHROMOSOMAL LOCATION

Genetic locus: YTHDC1 (human) mapping to 4q13.2; Ythdc1 (mouse) mapping to 5 E1.

SOURCE

YT521-B (8) is a mouse monoclonal antibody raised against amino acids 6-123 of YT521-B of rat origin.

PRODUCT

Each vial contains 200 µg IgG1 kappa light chain in 1.0 ml PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

YT521-B (8) is recommended for detection of YT521-B of human and rat origin and Ythdc1 of mouse by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for YT521-B siRNA (h): sc-88938, YTHDC1 siRNA (m): sc-155421, YT521-B shRNA Plasmid (h): sc-88938-SH, YTHDC1 shRNA Plasmid (m): sc-155421-SH, YT521-B shRNA (h) Lentiviral Particles: sc-88938-V and YTHDC1 shRNA (m) Lentiviral Particles: sc-155421-V.

Molecular Weight of YT521-B: 110 kDa.

Positive Controls: MDCK cell lysate: sc-2252 or rat cerebellum extract: sc-2398.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blotting Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA

Storage 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. Not for resale.

PROTOCOLS

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