BACKGROUND

KNP-I (ES1 protein homolog, protein GT335) is a ubiquitously expressed mitochondrial protein that belongs to the ES1 family of proteins. It is a highly conserved protein with homologs identified in various species. This conserved nature suggests an important biological role for the KNP-I protein. The gene that encodes KNP-I (C21orf33) is located on human chromosome 21 in close proximity to a region (D21S25) associated with many genetic diseases. Down syndrome (DS), caused by an extra copy of chromosome 21, is the most common manifestation of trisomic chromosomes. It is likely that the overproduction of the C21orf33 gene product plays a role in the pathology of DS, while its chromosomal location suggests its likely involvement in D21S25 related diseases. While expressed in most tissue, highest expression of KNP-I is found in heart and muscle.

REFERENCES


CHROMOSOMAL LOCATION

Genetic locus: C21orf33 (human) mapping to 21q22.3; D10Jhu81e (mouse) mapping to 10 C1.

SOURCE

KNP-I (MM-7) is a mouse monoclonal antibody raised against recombinant KNP-I of human origin.

PRODUCT

Each vial contains 100 µg IgG1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

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

APPLICATIONS

KNP-I (MM-7) is recommended for detection of KNP-I of human origin, D10Jhu81e of mouse origin and the corresponding rat homolog 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), immunohistochemistry (including paraffin-embedded sections) (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 KNP-I siRNA (h): sc-91466, D10Jhu81e siRNA (m): sc-142774, KNP-I shRNA Plasmid (h): sc-91466-SH, D10Jhu81e shRNA Plasmid (m): sc-142774-SH, KNP-I shRNA (h) Lentiviral Particles: sc-91466-V and D10Jhu81e shRNA (m) Lentiviral Particles: sc-142774-V.

Molecular Weight of KNP-I: 28 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200 or mouse heart extract: sc-2254.

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, 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 m-IgGκ BP-ITC: 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

KNP-I (MM-7): sc-101055. Western blot analysis of KNP-I expression in HeLa whole cell lysate.

KNP-I (MM-7): sc-101055. Immunofluorescence staining of paraformaldehyde-fixed HeLa cells (A) and immunoperoxidase staining of formalin-fixed, paraffin-embedded human small intestine tissue (B) showing cytoplasmic localization.

PROTOCOLS

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