

PRPF38A (F-7): sc-373907

BACKGROUND

PRPF38A (pre-mRNA-splicing factor 38A) is a 312 amino acid nuclear protein that is likely required for pre-mRNA splicing. There are two isoforms of PRPF38A that are produced as a result of alternative splicing events. The gene encoding PRPF38A maps to human chromosome 1, the largest human chromosome which spans about 260 million base pairs and makes up 8% of the human genome. There are about 3,000 genes on chromosome 1 and considering the great number of genes there are also a large number of diseases associated with chromosome 1. Notably, the rare aging disease Hutchinson-Gilford progeria is associated with the LMNA gene which encodes Lamin A. When defective, the LMNA gene product can build up in the nucleus and cause characteristic nuclear blebs. The mechanism of rapidly enhanced aging is unclear and is a topic of continuing exploration. The MUTYH gene is located on chromosome 1 and is partially responsible for familial adenomatous polyposis. Stickler syndrome, Parkinsons, Gaucher disease and Usher syndrome are also associated with chromosome 1.

REFERENCES

1. Schutte, B.C., et al. 2001. Report and abstracts of the sixth international workshop on human chromosome 1 mapping 2000. Iowa City, Iowa, USA 30 September-3 October 2000. Cytogenet. Cell Genet. 92: 23-41.
2. Murphy, W.J., et al. 2003. The origin of human chromosome 1 and its homologs in placental mammals. Genome Res. 13: 1880-1888.
3. Xi, X.H., et al. 2005. Splicing site mutation of D19S418 in PRPF-31 gene and its phenotypic characters with autosomal dominant retinitis pigmentosa. Zhonghua Yan Ke Za Zhi 41: 1020-1026.
4. Gregory, S.G., et al. 2006. The DNA sequence and biological annotation of human chromosome 1. Nature 441: 315-321.
5. Scott, W.G., et al. 2009. Structure and function of regulatory RNA elements: ribozymes that regulate gene expression. Biochim. Biophys. Acta 1789: 634-641.

CHROMOSOMAL LOCATION

Genetic locus: PRPF38A (human) mapping to 1p32.3; Prpf38a (mouse) mapping to 4 C7.

SOURCE

PRPF38A (F-7) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 157-180 within an internal region of PRPF38A of human origin.

PRODUCT

Each vial contains 200 µg IgG₃ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-373907 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

PRPF38A (F-7) is recommended for detection of PRPF38A of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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).

PRPF38A (F-7) is also recommended for detection of PRPF38A in additional species, including equine, porcine and avian.

Suitable for use as control antibody for PRPF38A siRNA (h): sc-88607, PRPF38A siRNA (m): sc-152494, PRPF38A shRNA Plasmid (h): sc-88607-SH, PRPF38A shRNA Plasmid (m): sc-152494-SH, PRPF38A shRNA (h) Lentiviral Particles: sc-88607-V and PRPF38A shRNA (m) Lentiviral Particles: sc-152494-V.

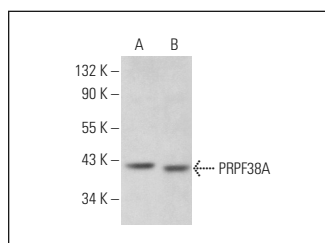
Molecular Weight of PRPF38A: 37 kDa.

Positive Controls: K-562 nuclear extract: sc-2130, IMR-32 cell lysate: sc-2409 or SK-N-MC nuclear extract: sc-2154.

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® Blocking Reagent: sc-516214 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-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



PRPF38A (F-7): sc-373907. Western blot analysis of PRPF38A expression in IMR-32 whole cell lysate (A) and K-562 nuclear extract (B).

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.