BACKGROUND
Pre-mRNA splicing is a critical step in the post-translational regulation of gene expression. The process of removing intron sequences from mRNA is a two-step enzymatic reaction that requires the action of the spliceosome, a large multicomponent ribonucleoprotein complex. The polypyrimidine tract-binding protein (PTB)-associated splicing factor (PSF) is a ubiquitously expressed protein that forms a complex with PTB, also designated hnRNP I, which is required for early spliceosome formation and is essential for catalytic step II. The localization of PSF to speckles is dependent upon the presence of the second RRM motif. PSF also can associate with the DNA binding domains (DBDs) of thyroid hormone receptors and retinoic acid receptors, where it acts as a repressor by recruiting HDACs to the DBDs. PSF is expressed in neurons during development and may be involved in neuronal differentiation and maturation. PSF is proteolytically cleaved to produce a shorter fragment in myeloid cells.

REFERENCES

CHROMOSOMAL LOCATION
Genetic locus: SFPQ (human) mapping to 1p34.3; Sfpq (mouse) mapping to 4D2.2.

SOURCE
PSF (39-1) is a mouse monoclonal antibody raised against recombinant PSF of human origin.

PRODUCT
Each vial contains 100 µg IgG2a 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
PSF (39-1) is recommended for detection of PSF of mouse, rat and human 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), 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).

RECOMMENDED SECONDARY REAGENTS
To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-mouse IgG-HRP: sc-2005 (dilution range: 1:2000-1:32,000) or Cruz Marker™ compatible goat anti-mouse IgG-HRP: sc-2031 (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-mouse IgG-FITC: sc-2009 (dilution range: 1:100-1:400) or goat anti-mouse IgG-TR: sc-2010 (dilution range: 1:100-1:400) or goat anti-mouse IgG-TR: sc-2781 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941. 4) Immunohistochemistry: use ImmunoCruz™: sc-2050 or ABC: sc-2017 mouse IgG Staining Systems.

DATA

PPSF (39-1): sc-101137. Western blot analysis of PSF expression in HeLa nuclear extract.  

PSF (39-1): sc-101137. Immunofluorescence staining of paraffin-embedded fixed HeLa cells (A) and Immunoperoxidase staining of formalin-fixed, paraffin-embedded human thyroid nodular goiter tissue (B) showing nuclear localization.

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

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