Technical Data Sheet

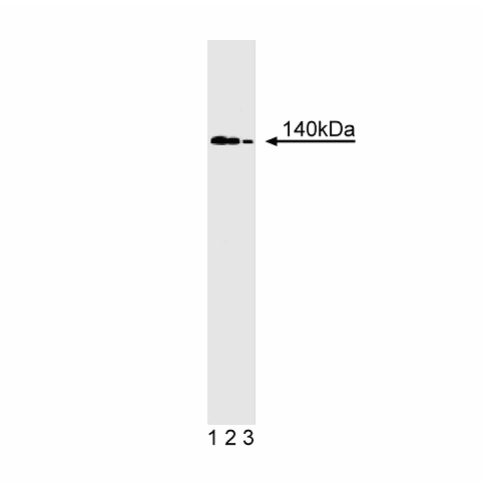
Purified Mouse Anti-hPrp16

Product Information

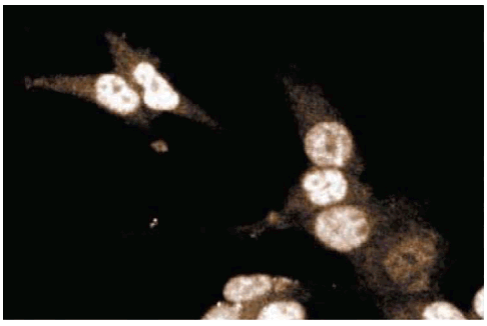
Material Number:	**611323**
Size:	150 µg
Concentration:	250 µg/ml
Clone:	50/hPrp16
Immunogen:	Human hPrp16 aa. 1002-1203
Isotype:	Mouse IgG1
Reactivity:	QC Testing: Human
Target MW:	140 kDa
Storage Buffer:	Aqueous buffered solution containing BSA, glycerol, and ≤0.09% sodium azide.

Description

Splicing, the removal of introns from pre-mRNA, is mediated by spliceosomal complexes and occurs in two distinct catalytic steps. The first step involves cleavage of the 5' exon and the production of a lariat intermediate. In the second step, the 3'-splice site is cleaved and the exons are fused with concomitant release of the intron lariat. The spliceosome contains multiple snRNPs and a number of non-snRNP splicing factors. Four yeast proteins (Prp16p, Prp17p, Prp18p, and Slu7p) function exclusively in the second catalytic step. Human homologs have been identified for Prp16p (hPrp16), Prp17p (hPrp17), and Prp18p (hPrp18). Prp16 is a DExD/DExH-box family RNA dependent ATPase, which can unwind RNA duplexes. hPrp16 is 41% identical to its yeast counterpart and chimeric yeast-human Prp16 can rescue a yeast Prp16 knockout strain. The non-conserved N-terminal region of hPrp16 is essential for viability, required for nuclear localization, and capable of binding to the splicesome during the second catalytic step. Thus, hPrp16 is a non-snRNP that is critical for spliceosomal function in the process of pre-mRNA splicing.



Western blot analysis of hPrp16 on HeLa cell lysate. *Lane 1: 1:250, lane 2: 1:500, lane 3: 1:1000 dilution of anti-hPrp16.*



Immunofluorescent staining of ES2 cells.

Preparation and Storage

The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.
Store undiluted at -20°C.

Application Notes

Application

Western blot	Routinely Tested
Immunofluorescence	Tested During Development

Recommended Assay Procedure:

Western blot: Please refer to http://www.bdbiosciences.com/pharmingen/protocols/Western_Blotting.shtml.

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Suggested Companion Products

Catalog Number	Name	Size	Clone
611449	HeLa Cell Lysate	500 µg	(none)
554002	HRP Goat Anti-Mouse Ig	1.0 ml	(none)
554001	FITC Goat Anti-Mouse Ig	0.5 mg	Polyclonal

Product Notices

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
2. Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols.
3. Caution: Sodium azide yields highly toxic hydrazoic acid under acidic conditions. Dilute azide compounds in running water before discarding to avoid accumulation of potentially explosive deposits in plumbing.
4. Source of all serum proteins is from USDA inspected abattoirs located in the United States.

References

Wang Y, Guthrie C. PRP16, a DEAH-box RNA helicase, is recruited to the spliceosome primarily via its nonconserved N-terminal domain. *RNA*. 1998; 4(10):1216-1229.(Biology)

Wang Y, Wagner JD, Guthrie C. The DEAH-box splicing factor Prp16 unwinds RNA duplexes in vitro. *Curr Biol*. 1998; 8(8):441-451.(Biology)

Zhou Z, Reed R. Human homologs of yeast prp16 and prp17 reveal conservation of the mechanism for catalytic step II of pre-mRNA splicing. *EMBO J*. 1998; 17(7):2095-2106.(Biology)