



Qty: 100 µg/200 µl

Mouse anti-SR Proteins

For Research Use Only

Catalog No. 33-9400

Lot No.

Mouse anti-SR Proteins (1H4)

FORM

This monoclonal antibody is highly purified from mouse ascites by Protein A chromatography. The antibody is supplied as a 200 µl aliquot at a concentration of 0.5 mg/ml in PBS, pH 7.4, containing 0.1% sodium azide.

CLONE: 1H4, also known as (1H4G7).⁽¹⁾ **ISOTYPE:** IgG₁-kappa

IMMUNOGEN⁽¹⁾

Mass-isolated nuclei from *Xenopus Laevis* oocytes.

SPECIFICITY

This monoclonal antibody can be used to detect the non-snRNP splicing factors termed SR proteins. The 1H4 mAb recognizes all members of the SR protein family. However, the 1H4 epitope is phosphorylation-dependent so care must be taken to avoid dephosphorylation. 1H4 binding activity is confirmed by Western blotting of HeLa cell extracts and HeLa cell nuclear extracts.

REACTIVITY

Species reactivity includes human and *Xenopus*. Reactivity of this antibody with other species has not been evaluated.

Sample	ELISA	Immuno-fluorescence	Western Blotting
Human		+	+
Xenopus		+	+
Immunogen	+		

USAGE

Working concentrations for specific applications should be determined by the investigator. Appropriate concentrations will be affected by several factors, including secondary antibody affinity, antigen concentration, sensitivity of detection method, temperature and length of incubations, etc. The suitability of this antibody for applications other than those listed below has not been determined. The following concentration ranges are recommended starting points for this product.

ELISA: 0.1-1.0 µg/ml
Immunofluorescence^{1,2}: 2-3 µg/ml
Western Blotting¹: 0.4-10 µg/ml

Western Blotting Notes: Use 3% BSA in blocking solution. Avoid using serum or non-fat dry milk. 0.2% β-glycerolphosphate may also be added to the blocking solution as a precautionary measure.

Immunofluorescence Notes: Lower antibody concentrations (0.4 – 1.0 µg/ml) produce a somewhat different staining pattern than do higher concentrations. Low antibody concentrations produce discrete spherical particles while higher antibody concentrations give both the smaller particles and larger staining objects (particles vs speckles). For further explanation, see reference 2.

(cont'd)

www.invitrogen.com

Invitrogen Corporation • 542 Flynn Rd • Camarillo • CA 93012 • Tel: 800.955.6288 • E-mail: techsupport@invitrogen.com

PI339400

(Rev 10/08) DCC-08-1089

Important Licensing Information - These products may be covered by one or more Limited Use Label Licenses (see the Invitrogen Catalog or our website, www.invitrogen.com). By use of these products you accept the terms and conditions of all applicable Limited Use Label Licenses. Unless otherwise indicated, these products are for research use only and are not intended for human or animal diagnostic, therapeutic or commercial use.

STORAGE

Store at 2-8°C for up to one month. Store at -20°C for long term storage. Avoid repeated freezing and thawing.

BACKGROUND

SR proteins are family of highly conserved arginine/serine rich, spliceosome associated phosphoproteins essential for metazoan pre-mRNA splicing^(3,4). SR proteins appear to act early in splicing by promoting splice site recognition and spliceosome assembly. SR proteins also play a regulatory role, because they can determine alternative splice site usage in vivo and in vitro⁽⁵⁻⁷⁾—a particularly interesting example being the regulation of adenovirus alternative RNA splicing by dephosphorylation of SR proteins⁽⁸⁾. SR proteins appear to be recruited from nuclear “speckles”, in which they are concentrated, to sites of transcription in order to spatially coordinate transcription and pre-mRNA splicing within the cell nucleus^(1,9).

REFERENCES

1. Tuma, R, et al. J. Cell Biol. 122:767-773 (1993)
2. Neugebauer, KM and Roth, MB Genes and Development 11:1148-1159 (1997).
3. Tacke R and Manley JL, Proc Soc Exp Biol Med 220:59-63 (1999).
4. Graveley BR et al., Curr Biol 9:R6-7 (1999).
5. Fu X-D, Nature 365:82-85 (1993).
6. Zahler AM, et al., Science 260:219-222 (1993).
7. Caceres JF, Science 265:1706-1709 (1994).
8. Kanopka A et al., Nature 393:185-7 (1998).
9. Misteli T et al., Nature 387:523-527 (1997).

RELATED PRODUCTS

Product	Clone	Cat. No.
Ms x SR Proteins	16H3	33-9300
Ms x SRp20	7B4A12	33-4200

Product	Conjugate	Cat. No.
Goat anti-Mouse IgG (H+L) (ZyMAX™ Grade)	Purified	81-6500
	FITC	81-6511
	TRITC	81-6514
	Cy™3	81-6515
	Cy™5	81-6516
	HRP	81-6520
	AP	81-6522
	Biotin	81-6540

Protein A	Sepharose® 4B	10-1041
rec-Protein G	Sepharose® 4B	10-1241

Zymed® and ZyMAX™ are trademarks of Zymed Laboratories Inc. Cy™3 and Cy™5 are trademarks of Amersham Life Sciences, Inc. Sepharose® is a registered trademark of Pharmacia LKB.

For Research Use Only

www.invitrogen.com

Invitrogen Corporation • 542 Flynn Rd • Camarillo • CA 93012 • Tel: 800.955.6288 • E-mail: techsupport@invitrogen.com

PI339400

(Rev 10/08) DCC-08-1089

Important Licensing Information - These products may be covered by one or more Limited Use Label Licenses (see the Invitrogen Catalog or our website, www.invitrogen.com). By use of these products you accept the terms and conditions of all applicable Limited Use Label Licenses. Unless otherwise indicated, these products are for research use only and are not intended for human or animal diagnostic, therapeutic or commercial use.