



Qty: 100 µg/200 µl

Mouse anti-Perlecan

Catalog No. 13-4400

Lot No. See product label

Mouse anti-Perlecan

FORM

This monoclonal 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 (NaN₃). This antibody is purified from mouse ascites fluid.

CLONE: 7B5⁽¹⁾

ISOTYPE: Mouse IgG₁

IMMUNOGEN: rec-Perlecan domain III

SPECIFICITY

This antibody reacts with domain III of human perlecan. Domain III shares homology with the short arm of laminin A and B chains.

REACTIVITY

Human, (positive control: human breast, colon, liver, lymph nodes, pancreas, and prostate tissues).

USAGE

Working concentrations for specific applications should be determined by the investigator. Appropriate dilutions 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.

Western blotting⁽²⁾: 1-2 µg/ml

ELISA⁽²⁾

**Immunohistostaining of frozen or formalin-fixed,
paraffin-embedded tissues and cells**⁽²⁾: 5-10 µg/ml

* Please note that Immunohistostaining of formalin-fixed, paraffin-embedded tissues requires a 0.1% protease (Sigma P-5147) pretreatment for 30 minutes at room temperature prior to the blocking step.

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

^(2,3)

Human perlecan (HSPG2) core protein is a large, complex, multidomain heparan sulfate proteoglycan with a MW of ~467 kDa (determined from the cDNA sequence). Post-translational modifications of HSPG2 can increase the MW to ~850 kDa. Of the five domains that comprise perlecan; domain I (N terminal) is predicted to be the site of heparan sulfate linkage to 3 glycosaminoglycans, domain II is homologous to the LDL receptor, domain III shares homology with the short arm of laminin A and B chains, domain IV contains IgG-like repeats similar to those found in N-CAM and has a hydrophobic region suitable for interacting with the membrane, and domain V has regions similar to EGF and the G-domain of laminin A chain. Perlecan is a major component of basement membranes and extracellular matrices, and is involved with cell adhesion and growth regulation. In skin, perlecan is synthesized exclusively by the connective tissue in the dermal layer. Perlecan has been detected in many human tissues, including; breast, colon, liver, lymph nodes, pancreas, and prostate, among others. Proteins similar to perlecan have been identified in colon carcinoma⁽⁴⁾, EHS tumor⁽⁵⁾, and fibrosarcoma cells⁽⁶⁾.

(cont'd)

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PI134400

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REFERENCES

1. Murdoch, A.D. et al; Widespread expression of perlecan proteoglycan in basement membranes and extracellular matrices of human tissues as detected by a novel monoclonal antibody against domain III and by in situ hybridization. *J Histochem and Cytochem* 42(2):239-249 (1994).
2. Murdoch, A.D. et al; Primary structure of the human heparan sulfate proteoglycan from basement membrane (HSPG2/Perlecan). *J Biol Chem* 267:8544-8557 (1992).
3. Cohen, I.R. et al; Structural characterization of the complete human perlecan gene and its promoter. *PNAS, USA* 90:10404-10408 (1993).
4. Iozzo, R.V. *J Cell Biol* 99:403-417 (1984).
5. Paulsson, M. et al; *J Mol Biol* 197:297-313 (1987).
6. Kallunki, P. et al; *Genomics* 11:389-396 (1991).

RELATED PRODUCTS

Product	Conjugate	Cat. No.
Goat anti-Mouse IgG (H+L) (ZyMAX™ Grade)	Purified	81-6500
	FITC	81-6511
	TRITC	81-6514
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	Cy™5	81-6516
	HRP	81-6520
	AP	81-6522
Protein A rec-Protein G	Sepharose® 4B	10-1041
	Sepharose® 4B	10-1241

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