

monoclonal antibody anti-human Fibrin β -chain IgG

REF 350

Description

The cleavage of fibrinogen to fibrin by thrombin is the final event in the coagulation cascade. Fibrinogen is a 340,000 D molecular weight glycoprotein synthesized in the liver which circulates in plasma at a concentration of approximately 3.0 mg/mL. It exists as a disulfide-linked dimer comprised of three pairs of polypeptide chains denoted as A α , B β and γ , themselves disulfide-linked. Thrombin cleaves the amino-terminal of the A α chain releasing Fibrinopeptide A (FPA, aa 1-16) and generating fibrin. Thrombin also cleaves the amino-terminal of the B β chain releasing Fibrinopeptide B (aa 1-14). Releasing FPA and FPB allow the A α and B β chains to polymerize and form the fibrin network.

REF 350 is a murine IgG₁ monoclonal antibody that reacts with the 57,000 D molecular weight β -chain (beta-chain) of human fibrin(ogen), as well as the Fragment X and Fragment Y of non-reduced fibrinogen degradation product (FDP) and the β molecule of reduced fibrinogen degradation product. It does not react with Fragment D, Fragment E, or intact fibrinogen. Accordingly, it is noted that REF 350 binds to the fibrin monomer. In addition, it inhibits clot retraction.

Presentation

Screw-capped clear glass vial containing 0.5 mg of purified IgG₁ lyophilized from a 0.5 mL solution of 0.15M Phosphate Buffered Saline, 100 mM Mannitol, pH 7.2.

Reconstitution

Add 0.5 mL of filtered deionized or sterile water to generate a 1.0 mg/mL stock solution.

Storage

Store lyophilized antibody at 2°-8°C. Aliquot and store reconstituted antibody at -20°C or colder.

Warnings and Precautions

For Research Use Only.

Applications

Immunohistochemistry

REF 350 successfully stains fibrin (β -chain of fibrinogen) in snap frozen human cardiac allografts. The suggested primary antibody concentration is 50 μ g/mL.¹

REF 350 has also shown to cross react with fibrin of several species. Using a primary antibody concentration of 20 μ g/mL, the antibody successfully stained fibrin in formalin-fixed, paraffin embedded canine mammary neoplastic tissue³ and in formalin-fixed, paraffin embedded rabbit pleural tissue.⁴

References

1. Faulk, W., *et al.* Vascular Immunopathology and Atheroma Development in Human Allografted Organs. *Archives of Pathology and Laboratory Medicine* 1992, **116**: 1337-1344.
2. Idell, S., *et al.* Regulation of Fibrin Deposition by Malignant Mesothelioma. *American Journal of Pathology* 1995, **147**: 1318-1329.
3. Golombiewski, A., *et al.* Immunological Assessment of Fibrin Deposition and Thrombus Formation in Canine Mammary Neoplasia. *Journal of Comparative Pathology* 1997, **117**: 177-183.
4. Idell, S., *et al.* Tissue Factor Pathway Inhibitor in Tetracycline-induced Pleuritis in Rabbits. *Thrombosis and Haemostasis* 1998, **79**: 649-655.
5. Courtman, D. W., *et al.* Sequential Injury of the Rabbit Abdominal Aorta Induces Intramural Coagulation and Luminal Narrowing Independent of Intimal Mass. *Circulation Research* 1998, **82**: 996-1006.

Definition of Symbols

	Consult instructions for use
	Manufacturer
	Refer to Safety Data Sheet
	Temperature Limitation
	Lot Number
	Expiration Date
	Catalog Number