



monoclonal antibodies against human factor IX

Description

Four different monoclonal antibodies against human factor IX are available, Product Codes ESN 1 to 4. The antibodies were derived by immunization of mice with Factor IX, purified to homogeneity from human plasma. Hybridomas were obtained by fusion of the immunized spleen cells with NS-0 or NS-1 murine myeloma cell lines.

Subclass and Affinity Constants

Product Code	Ig Subclass	Affinity Constant (l/mol)
ESN 1	IgG ₁	0.40 x 10 ⁹
ESN 2	IgG _{2b}	0.22 x 10 ⁹
ESN 3	IgG ₁	0.29 x 10 ⁹
ESN 4	IgG _{2a}	0.29 x 10 ⁹

Specificity of the Antibodies

- Each antibody reacts with the heavy chain of factor IXa (no reactivity with other human plasma proteins).
- ESN-1 is reported (Dr Peter Larsen, Children Hospital, Philadelphia, PA) to recognize canine factor IX.

Applications

- ESN 2 and 3 show some cross reaction and thus recognize closely related epitopes while the other two antibodies bind to separate epitopes on factor IX. Immunoassays for factor IX are thus possible.
- Each antibody retains its activity following covalent coupling to insoluble gels and in this form may be used for immunodepletion and immunopurification of factor IX, particularly No. 5990.
- Antibodies ESN 2, 3 and 4 inhibit the activity of factor IX in plasma although this is not complete even at high antibody concentrations (75-85% inhibition).
- ELISA for factor IX quantitation can be established using a pairing of monoclonals ESN 1 and ESN 4.

Presentation and Storage

ESN-1 Screw-capped clear glass vial of 0.5 mg of antibody lyophilized from a 0.15M PBS, pH 7.4 buffer. Store at 2 - 8°C. Reconstitute with 1.0 mL filtered deionized water.

ESN-2, 3, 4 Screw-capped clear glass vial of 0.5 mg of antibody lyophilized from a 0.15M PBS, pH 7.4 with 200 mM Mannitol added. Store at 2 - 8°C. Reconstitute with 0.5 mL filtered deionized water.

Reference

Bessos, *et al. Thrombosis Research* 1985; **40**: 863-867.