

Product Information

COMPLEMENT FACTOR B, HUMAN

Product No. **C 4909**

Store below 0°C

Factor B is a heat labile γ 2-globulin with a single polypeptide chain. Serum concentration is 200-250 μ g/ml. Factor B is polymorphic as judged by electrophoretic mobility¹. It plays an important role in the alternative pathway of complement activation. Factor B can be activated and cleaved into factor Ba and Bb with factor D in the presence of either factor C3b or cobra venom². Bb is the catalytic subunit of alternative pathway C3 convertase and C5 convertase³. The activity of factor B can be assayed by the method of Borsos⁴ using EAC4,3 cells, by the method of Martin⁵ using hemolytic diffusion plate or by the method of Thomas⁶ using factor B deficient serum and rabbit erythrocytes. The isolated factor B will give a concentration-dependent cell lysis.

Storage/Stability

Store lyophilized powder below 0°C. Store at -70°C after reconstitution with distilled water. Repeated freezing and thawing is **not** recommended.

Product Profile

Protein: Determined by method of Lowry.

Form: Lyophilized from a solution containing 0.05 M Tris, 0.02 M NaCl, 0.01 M EDTA and 0.01 M γ -aminocaproic acid, pH 7.5

Approx. molecular weight: 90,000⁷

Isoelectric point: 6.5⁵

Purity: Single arc as determined by immunoelectrophoresis at 20 μ g protein per gel against both anti-B serum and anti-whole serum.

Activity: Functionally active as assayed by modified method of Thomas⁶ using factor B deficient serum.

Alternative pathway activity can be fully restored by adding purified factor B at physiological concentration (200-250 μ g/ml).

References

1. Shiraish, S., *et al.*, *Immunochemistry*, **12**, 935 (1975)
2. Müller-Eberhard, H.J., *et al.*, *Adv. Immunol.*, **29**, 1-53 (1980)
3. Reid, K.B.M., *et al.*, *Ann. Rev. Biochem.*, **50**, 433-464 (1981)
4. Borsos, T., *et al.*, *J. Immunol.*, **105**, 1439 (1970)
5. Martin, A., *et al.*, *Immunochemistry*, **13**, 317-324 (1976)
6. Thomas, A.E., *et al.*, *J. Immunology*, **113**, 1, 348-358 (1974)
7. Curman, B. *et al.*, *Biochemistry*, **16**, 24 (1977)

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