

Crystallization grade recombinant complement Factor B



Catalog UCB002
Batch 1671
product specification sheet: PS-B002

Product description

Complement factor B is a component of the alternative pathway of complement activation. Factor B circulates in the blood as a single chain polypeptide. Upon activation of the alternative pathway, it is cleaved by complement factor D yielding the noncatalytic chain Ba and the catalytic subunit Bb. The active subunit Bb is a serine protease which associates with C3b to form the alternative pathway C3 convertase. Bb is involved in the proliferation of preactivated B lymphocytes, while Ba inhibits their proliferation.

The cDNA coding for Factor B was cloned and expressed in HEK293EBNA1 cells that are deficient in an enzyme that is involved in N-linked glycosylation of glycoproteins. As a result, recombinant factor B produced from this cell line contains N-linked glycans of the short and simple man₅-GlcNAc₂ type. Therefore, this factor B is extremely suitable for protein crystallization experiments. Factor B is purified to homogeneity, see figure 1. It contains an N-terminal hexahistidine tag. Each vial contains 400 µg factor B at a concentration of 16 mg/ml.

Storage and stability

Factor B should be stored at - 80 °C (stable for at least 1 year). The buffer contains 25 mM Tris 150 mM NaCl pH 7.5 without preservative. After thawing it should be stored in appropriate small aliquots at - 20 °C or - 80 °C (stable for at least 2 months).

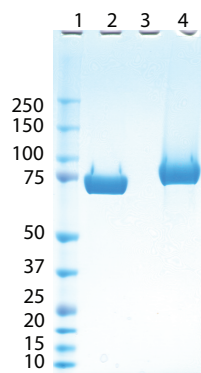


Figure 1. NuPage analysis at 1 mg/ml
Lane 1: marker
Lane 2: Factor B, non reduced
Lane 4: Factor B, reduced

Reference

Factor B structure provides insights into activation of the central protease of the complement system , F.J. Milder, L. Gomes, A. Schouten, B.J.C. Janssen, E.G. Huizinga, R.A. Romijn, W. Hemrika, A. Roos, M.R. Daha and P. Gros, Nature Structural & Molecular Biology, 14, 224 - 228

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