



# Human Factor Bb (DAG4683)

This product is for research use only and is not intended for diagnostic use.

## PRODUCT INFORMATION

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| <b>Product Overview</b> | Human Factor Bb (fragment of factor B)                           |
| <b>Species</b>          | Human  |
| <b>Purity</b>           | > 95% by SDS-PAGE  |
| <b>Conjugate</b>        | Unconjugated   |
| <b>Applications</b>     | immunogen  |
| <b>Format</b>           | Frozen liquid  |
| <b>Concentration</b>    | 1.0 mg/ml (see Certificate of Analysis for actual concentration) |
| <b>Buffer</b>           | Phosphate-buffered saline, pH 7.3                                |
| <b>Preservative</b>     | None   |
| <b>Storage</b>          | 2-8°C short term, -20°C long term                                |

## BACKGROUND

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| <b>Introduction</b> | <p>Factor Bb is the fragment of complement factor B that results from activation of the alternative pathway. The Bb fragment is made from factor B which was purified from normal human serum. Complement factor B is a glycosylated protein composed of a single 93,000 Da polypeptide chain. It is an essential component of the alternative pathway of complement activation and is found in plasma at approximately 200 µg/mL. In the presence of Mg<sup>++</sup> factor B binds to C3b and the C3b,B complex can be activated by factor D, a serine protease that circulates as an active trypsin-like serine protease. Cleavage of factor B by factor D causes the release of the Ba fragment (33,000 Da) and leaves the 60,000 Bb fragment bound to C3b. This Bb subunit comes from the C-terminal of factor B and it contains the proteolytic active site of the serine</p> |
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protease C3b,Bb. C3b,Bb is called a C3 and a C5 convertase because it converts both of these proteins to their active forms by cleaving off the small peptides C3a and C5a, respectively. C3b,Bb is an unstable trypsin-like serine protease with a half-life of approximately 90 seconds. In the presence of factors that accelerate decay (factor H, DAF, and CR1) it is dissociated in seconds. This releases the fragment Bb into solution. Once released from C3b the Bb fragment is no longer active in complement and lacks a typical serine protease active site.

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**Keywords**

Human Factor Ba; fragment of factor B; Factor Ba

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