### Overview

<table>
<thead>
<tr>
<th><strong>Product name</strong></th>
<th>Anti-Factor alpha XIIa antibody [23E10]</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Description</strong></td>
<td>Mouse monoclonal [23E10] to Factor alpha XIIa</td>
</tr>
<tr>
<td><strong>Host species</strong></td>
<td>Mouse</td>
</tr>
<tr>
<td><strong>Tested applications</strong></td>
<td>Suitable for: WB, ELISA</td>
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<tr>
<td><strong>Species reactivity</strong></td>
<td>Reacts with: Mouse, Human</td>
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<tr>
<td><strong>Immunogen</strong></td>
<td>Recombinant full length protein corresponding to Mouse Factor alpha XIIa aa 1-597. Glycosylated Sequence:</td>
</tr>
<tr>
<td></td>
<td>MTALLFLGSLLMSDLTLTSAPPWKDSKKFKDAPDGP'T VVLTVDGRGFCFP</td>
</tr>
<tr>
<td></td>
<td>FQYHRQLHHC'HKRRPGSRPWCTPNFEDDOQWGG YCLEPKVQDHC'SK</td>
</tr>
<tr>
<td></td>
<td>HNPCHKGTCINTPNGPHCLCPEHHTGKHCQKEKCFE PQLKFFHENE'LW</td>
</tr>
<tr>
<td></td>
<td>FRTGPGGVARCECKGSEAHCKPVASQACSINPCLNG GSCLLVEDHPLCRC</td>
</tr>
<tr>
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<td>PTGYTGYFCDLWLWATCYEGRGLSYRGQAGTTQSGAP CQRWTVENYRNM</td>
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<tr>
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<td>TEKQALSWGLGHHAFCRNPDNDTRPWCFVWSGDRL SWDYCGLCQQTPTF</td>
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<td>APLVVPESQESPSQAPSLSHAPNSTDHQTSLSKTN TMGCQGQRFKGLS</td>
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<td>SFMRVVGGLVALPGSHPYAALYWGNFFACSLAPC WVLTAACNLQRNP</td>
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<tr>
<td></td>
<td>APEELTVLGQDHRNQSCEWCQLAVRSYRLHGFSG SITYQHDLLALRLQ</td>
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<tr>
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<td>ESKTNSCAISPHVQPVCNPSGAAPPSETVLCEVGW GHOFEAGEYSTF</td>
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<td>LQAEQVPIALDRCSNSYSVGDAILPGMCAGFLEGG TDAQCGGSGGPLV</td>
</tr>
<tr>
<td></td>
<td>CEEGTAEHQLTMLGAVSWGSGCGDRNKGVYTDVANY LAWIOQKHAS</td>
</tr>
</tbody>
</table>

**Database link:** [Q80YC5](#)
Properties

Form
Liquid

Storage instructions

Storage buffer
pH: 6.60
Constituents: 0.7% Sodium phosphate, 0.58% Sodium chloride, 0.03% EDTA

Purity
Protein G purified

Purification notes
ab187188 is a purified IgG fraction from Hybridoma cell culture.

Clonality
Monoclonal

Clone number
23E10

Isotype
IgG1

Light chain type
lambda

Applications

Our Abpromise guarantee covers the use of ab187188 in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

<table>
<thead>
<tr>
<th>Application</th>
<th>Abreviews</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>WB</td>
<td></td>
<td>Use at an assay dependent concentration. Predicted molecular weight: 68 kDa.</td>
</tr>
<tr>
<td>ELISA</td>
<td></td>
<td>Use at an assay dependent concentration.</td>
</tr>
</tbody>
</table>

Target

Function
Factor XII is a serum glycoprotein that participates in the initiation of blood coagulation, fibrinolysis, and the generation of bradykinin and angiotensin. Prekallikrein is cleaved by factor XII to form kallikrein, which then cleaves factor XII first to alpha-factor XIIa and then trypsin cleaves it to beta-factor XIIa. Alpha-factor XIIa activates factor XI to factor Xla. Alpha-factor XIIa activates factor XI to factor Xla.

Involvement in disease
Defects in F12 are the cause of factor XII deficiency (FA12D) [MIM:234000]; also known as Hageman factor deficiency. This trait is an asymptomatic anomaly of in vitro blood coagulation. Its diagnosis is based on finding a low plasma activity of the factor in coagulating assays. It is usually only accidentally discovered through pre-operative blood tests. F12 deficiency is divided into two categories, a cross-reacting material (CRM)-negative group (negative F12 antigen detection) and a CRM-positive group (positive F12 antigen detection).

Defects in F12 are the cause of hereditary angioedema type 3 (HAE3) [MIM:610618]; also known as estrogen-related HAE or hereditary angioneurotic edema with normal C1 inhibitor concentration and function. HAE is characterized by episodic local subcutaneous edema, and submucosal edema involving the upper respiratory and gastrointestinal tracts. HAE3 occurs exclusively in women and is precipitated or worsened by high estrogen levels (e.g., during pregnancy or treatment with oral contraceptives). It differs from HAE types 1 and 2 in that both concentration and function of C1 inhibitor are normal.

Sequence similarities
Belongs to the peptidase S1 family.
Contains 2 EGF-like domains.
Contains 1 fibronectin type-I domain.
Contains 1 fibronectin type-II domain.
Contains 1 kringle domain.
Contains 1 peptidase S1 domain.

**Post-translational modifications**

Factor XII is activated by kallikrein in alpha-factor XIIa, which is then further converted by trypsin into beta-factor XIIa. Alpha-factor XIIa is composed of the NH2-terminal heavy chain (Coagulation factor XIIa heavy chain) and the COOH-terminal light chain (Coagulation factor XIIa light chain), connected by a disulfide bond. Beta-factor XIIa is composed of 2 chains linked by a disulfide bond, a light chain (Beta-factor XIIa part 2), corresponding to the COOH-terminal light chain (Coagulation factor XIIa light chain) and a nonapeptide (Beta-factor XIIa part 1).

O- and N-glycosylated. The O-linked polysaccharides were not identified, but are probably the mucin type linked to GalNAc.

**Cellular localization**

Secreted.

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**Please note:** All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

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