

## Product datasheet for **BM2324**

### Factor XII (F12) (light chain) Mouse Monoclonal Antibody [Clone ID: 802]

#### Product data:

Product Type:	Primary Antibodies
Clone Name:	802
Applications:	ELISA, FN
Recommended Dilution:	ELISA, to detect/quantitate Factor XII and in coagulation assays.
Reactivity:	Human
Host:	Mouse
Isotype:	IgG1
Clonality:	Monoclonal
Immunogen:	Purified human Factor XII
Specificity:	Reacts with the light chain of Human Factor XII and at 100nM inhibits 50% of Factor XII activity.
Formulation:	PBS, pH 7.4, without preservatives State: Azide Free State: Liquid purified IgG fraction
Concentration:	lot specific
Purification:	Protein G affinity chromatography
Conjugation:	Unconjugated
Storage:	Upon receipt, store (in aliquots) at -20°C to -80°C. Avoid repeated freezing and thawing.
Stability:	Shelf life: one year from despatch.
Gene Name:	coagulation factor XII
Database Link:	<a href="#">Entrez Gene 2161 Human P00748</a>



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**Background:**

Coagulation factor XII circulates in blood as a zymogen. This single chain zymogen is converted to a two chain serine protease with an heavy chain (alpha factor XIIa) and a light chain. The heavy chain contains two fibronectin type domains, two epidermal growth factor (EGF) like domains, a kringle domain and a proline rich domain, whereas the light chain contains only a catalytic domain. On activation, further cleavages takes place in the heavy chain, resulting in the production of beta factor XIIa light chain and the alpha factor XIIa light chain becomes beta factor XIIa heavy chain. Prekallikrein is cleaved by factor XII to form kallikrein, which then cleaves factor XII first to alpha factor XIIa and then to beta factor XIIa. The active factor XIIa participates in the initiation of blood coagulation, fibrinolysis, and the generation of bradykinin and angiotensin. It activates coagulation factors VII and XI. Defects in Factor XII gene do not cause any clinical symptoms and the sole effect is that whole blood clotting time is prolonged.

**Synonyms:**

Hageman factor, HAF