

## Product datasheet

### Anti-Thrombin antibody [5G9] ab17199

★★★★★ [2 Abreviews](#) [2 References](#) [3 Images](#)

#### Overview

<b>Product name</b>	Anti-Thrombin antibody [5G9]
<b>Description</b>	Mouse monoclonal [5G9] to Thrombin
<b>Host species</b>	Mouse
<b>Specificity</b>	Binds to human thrombin and to a complex of human thrombin with the thrombin inhibitor hirudin.
<b>Tested applications</b>	<b>Suitable for:</b> WB, IHC-P
<b>Species reactivity</b>	<b>Reacts with:</b> Human
<b>Immunogen</b>	Full length native protein (purified) corresponding to Human Thrombin. Thrombin isolated from activated human plasma
<b>Epitope</b>	not mapped
<b>Positive control</b>	purified alpha thrombin IHC-P: Human liver FFPE tissue sections.
<b>General notes</b>	<p>The Life Science industry has been in the grips of a reproducibility crisis for a number of years. Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. Please check that this product meets your needs before purchasing.</p> <p>If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, along with publications, customer reviews and Q&amp;As</p>

#### Properties

<b>Form</b>	Liquid
<b>Storage instructions</b>	Shipped at 4°C. Store at +4°C. Do Not Freeze.
<b>Storage buffer</b>	<p>pH: 7.40</p> <p>Preservative: 0.097% Sodium azide</p> <p>Constituents: 0.0268% PBS, 2.9% Sodium chloride</p>
<b>Purity</b>	Protein G purified
<b>Clonality</b>	Monoclonal
<b>Clone number</b>	5G9
<b>Myeloma</b>	x63-Ag8.653
<b>Isotype</b>	IgG1

## Applications

### The Abpromise guarantee

Our **Abpromise guarantee** covers the use of ab17199 in the following tested applications.

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

Application	Abreviews	Notes
WB		1/500. Detects a band of approximately 75 kDa (predicted molecular weight: 70 kDa).
IHC-P	★★★★★ (2)	Use a concentration of 10 µg/ml.

## Target

### Function

Thrombin, which cleaves bonds after Arg and Lys, converts fibrinogen to fibrin and activates factors V, VII, VIII, XIII, and, in complex with thrombomodulin, protein C. Functions in blood homeostasis, inflammation and wound healing.

### Tissue specificity

Expressed by the liver and secreted in plasma.

### Involvement in disease

Factor II deficiency  
Ischemic stroke  
Thrombophilia due to thrombin defect  
Pregnancy loss, recurrent, 2

### Sequence similarities

Belongs to the peptidase S1 family.  
Contains 1 Gla (gamma-carboxy-glutamate) domain.  
Contains 2 kringle domains.  
Contains 1 peptidase S1 domain.

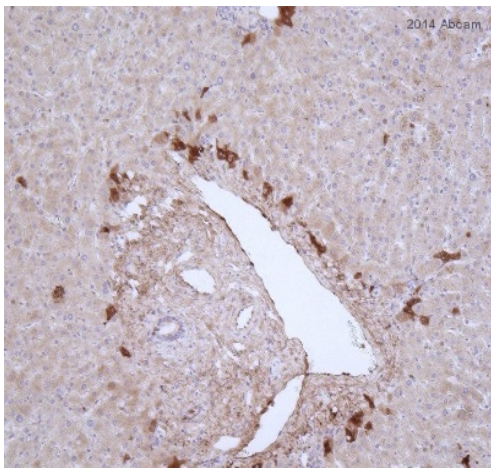
### Post-translational modifications

The gamma-carboxyglutamyl residues, which bind calcium ions, result from the carboxylation of glutamyl residues by a microsomal enzyme, the vitamin K-dependent carboxylase. The modified residues are necessary for the calcium-dependent interaction with a negatively charged phospholipid surface, which is essential for the conversion of prothrombin to thrombin.  
N-glycosylated. N-glycan heterogeneity at Asn-121: Hex3HexNAc3 (minor), Hex4HexNAc3 (minor) and Hex5HexNAc4 (major). At Asn-143: Hex4HexNAc3 (minor) and Hex5HexNAc4 (major).

### Cellular localization

Secreted, extracellular space.

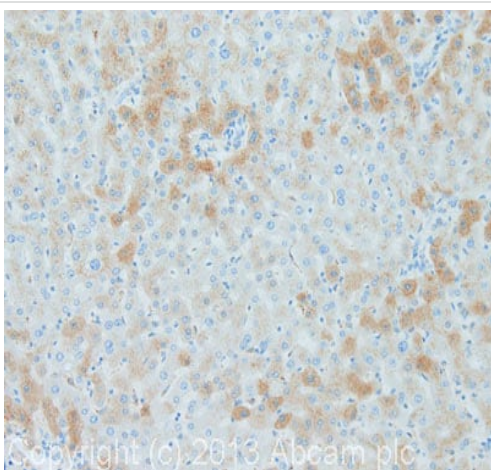
## Images



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Thrombin antibody [5G9] (ab17199)

This image is courtesy of an Abreview submitted by Steffen Rickelt

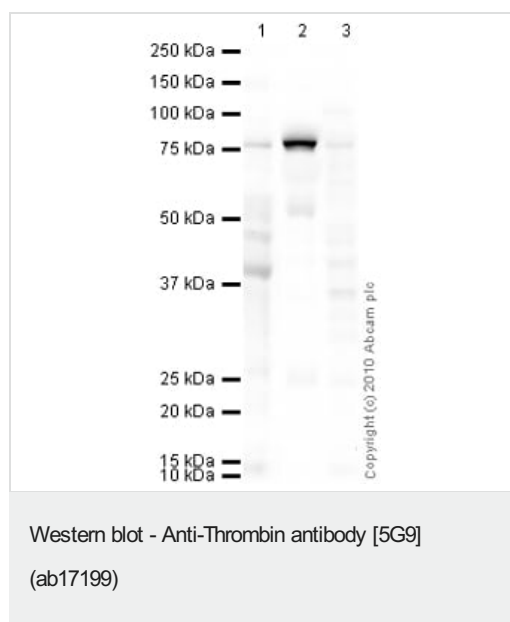
ab17199 staining Thrombin in human liver tissue sections by Immunohistochemistry (IHC-P - paraformaldehyde-fixed, paraffin-embedded sections). Tissue was fixed with formaldehyde, permeabilized with 0.2% Triton X-100 in PBS and blocked with 5% milk for 30 minutes at room temperature; antigen retrieval was by heat mediation in Tris pH 9.0. Samples were incubated with primary antibody (1/100 in PBS) for 16 hours at 4°C. An undiluted Biotin-conjugated horse anti-mouse IgG polyclonal was used as the secondary antibody.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Thrombin antibody [5G9] (ab17199)

IHC image of Thrombin staining in human liver formalin fixed paraffin embedded tissue section, performed on a Leica Bond system using the standard protocol F. The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH6, epitope retrieval solution 1) for 20 mins. The section was then incubated with ab17199, 10µg/ml, for 15 mins at room temperature and detected using an HRP conjugated compact polymer system. DAB was used as the chromogen. The section was then counterstained with haematoxylin and mounted with DPX.

For other IHC staining systems (automated and non-automated) customers should optimize variable parameters such as antigen retrieval conditions, primary antibody concentration and antibody incubation times.



**All lanes :** Anti-Thrombin antibody [5G9] (ab17199) at 1 µg/ml

**Lane 1 :** Human liver tissue lysate - total protein ([ab29889](#))

**Lane 2 :** Human Plasma Total Protein Lysate

**Lane 3 :** Hep G2 nuclear extract lysate ([ab14660](#))

Lysates/proteins at 10 µg per lane.

### Secondary

**All lanes :** Goat Anti-Mouse IgG H&L (HRP) preadsorbed ([ab97040](#)) at 1/5000 dilution

Developed using the ECL technique.

Performed under reducing conditions.

**Predicted band size:** 70 kDa

**Observed band size:** 75 kDa

**Additional bands at:** 40 kDa. We are unsure as to the identity of these extra bands.

**Exposure time:** 12 minutes

Thrombin contains a number of potential glycosylation sites (SwissProt) which may explain its migration at a higher molecular weight than predicted.

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

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