

## Product datasheet

### Anti-GGT1/GGT antibody [1F9] ab55138

★★★★★ [12 Abreviews](#) [11 References](#) [4 Images](#)

#### Overview

<b>Product name</b>	Anti-GGT1/GGT antibody [1F9]
<b>Description</b>	Mouse monoclonal [1F9] to GGT1/GGT
<b>Host species</b>	Mouse
<b>Tested applications</b>	<b>Suitable for:</b> WB, IHC-P, ICC/IF, Flow Cyt
<b>Species reactivity</b>	<b>Reacts with:</b> Mouse, Human
<b>Immunogen</b>	Recombinant fragment corresponding to Human GGT1/GGT aa 381-470. Sequence:  TAHLSVVAEDGSAVSATSTINLYFGSKVRSPVSGILFNNEM DDFSSPSIT NEFGVPPSPANFIQPGKQPLSSMCPTIMVGQDGQVRMVV G

Database link: [P19440](#)

 [Run BLAST with](#)

 [Run BLAST with](#)

#### General notes

This product was changed from ascites to tissue culture supernatant on 20th Jan 2020. Lot numbers higher than GR3280625 are from tissue culture supernatant. Please note that the dilutions may need to be adjusted accordingly. If you have any questions, please do not hesitate to contact our scientific support team.

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.

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&As

#### Properties

<b>Form</b>	Liquid
<b>Storage instructions</b>	Shipped at 4°C. Upon delivery aliquot and store at -20°C or -80°C. Avoid repeated freeze / thaw cycles.
<b>Storage buffer</b>	pH: 7.40

	Constituent: PBS
<b>Purity</b>	Protein A purified
<b>Clonality</b>	Monoclonal
<b>Clone number</b>	1F9
<b>Isotype</b>	IgG2a
<b>Light chain type</b>	kappa

## Applications

**The Abpromise guarantee** Our **Abpromise guarantee** covers the use of ab55138 in the following tested applications.

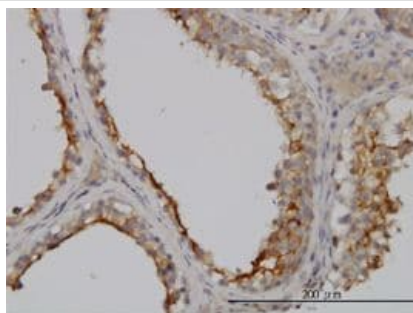
The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
<b>WB</b>	★★★★★ (1)	Use at an assay dependent concentration. Predicted molecular weight: 61 kDa.
<b>IHC-P</b>	★★★★★ (7)	Use at an assay dependent concentration.
<b>ICC/IF</b>	★★★★★ (2)	Use at an assay dependent concentration.
<b>Flow Cyt</b>		Use at an assay dependent concentration. <b>ab170191</b> - Mouse monoclonal IgG2a, is suitable for use as an isotype control with this antibody.

## Target

<b>Function</b>	Initiates extracellular glutathione (GSH) breakdown, provides cells with a local cysteine supply and contributes to maintain intracellular GSH level. It is part of the cell antioxidant defense mechanism. Catalyzes the transfer of the glutamyl moiety of glutathione to amino acids and dipeptide acceptors. Alternatively, glutathione can be hydrolyzed to give Cys-Gly and gamma glutamate. Isoform 3 seems to be inactive.
<b>Tissue specificity</b>	Detected in fetal and adult kidney and liver, adult pancreas, stomach, intestine, placenta and lung. Isoform 3 is lung-specific. There are several other tissue-specific forms that arise from alternative promoter usage but that produce the same protein.
<b>Pathway</b>	Sulfur metabolism; glutathione metabolism.
<b>Involvement in disease</b>	Defects in GGT1 are a cause of glutathionuria (GLUTH) [MIM:231950]; also known as gamma-glutamyltranspeptidase deficiency. It is an autosomal recessive disease.
<b>Sequence similarities</b>	Belongs to the gamma-glutamyltransferase family.
<b>Post-translational modifications</b>	N-glycosylated on both chains. Contains hexoses, hexosamines and sialic acid residues. Glycosylation profiles tested in kidney and liver tissues reveal the presence of tissue-specific and site-specific glycan composition, despite the overlap in composition among the N-glycans. A total of 36 glycan compositions, with 40 unique structures are observed. Up to 15 different glycans are observed at a single site, with site-specific variation in glycan composition. The difference in glycosylation profiles in the 2 tissues do not affect the enzyme activity.
<b>Cellular localization</b>	Membrane.

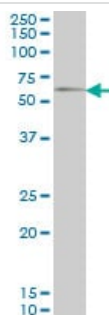
## Images



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-GGT1/GGT antibody [1F9] (ab55138)

GGT1/GGT antibody (ab55138) used in immunohistochemistry at 3ug/ml on formalin fixed and paraffin embedded human testis.

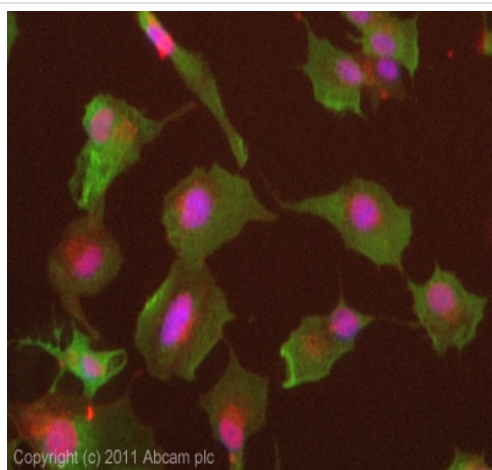
This image was generated using the ascites version of the product.



Western blot - Anti-GGT1/GGT antibody [1F9] (ab55138)

GGT1/GGT antibody (ab55138) at 1ug/lane + NIH/3T3 cell lysate at 25ug/lane.

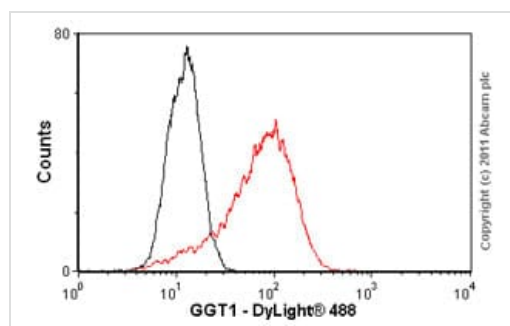
This image was generated using the ascites version of the product.



Immunocytochemistry/ Immunofluorescence - Anti-GGT1/GGT antibody [1F9] (ab55138)

ICC/IF image of ab55138 stained HepG2 cells. The cells were 4% formaldehyde fixed (10 min) and then incubated in 1%BSA / 10% normal goat serum / 0.3M glycine in 0.1% PBS-Tween for 1h to permeabilise the cells and block non-specific protein-protein interactions. The cells were then incubated with the antibody (ab55138, 1μg/ml) overnight at +4°C. The secondary antibody (green) was Alexa Fluor® 488 goat anti-mouse IgG (H+L) used at a 1/1000 dilution for 1h. Alexa Fluor® 594 WGA was used to label plasma membranes (red) at a 1/200 dilution for 1h. DAPI was used to stain the cell nuclei (blue) at a concentration of 1.43μM.

This image was generated using the ascites version of the product.



Flow Cytometry - Anti-GGT1/GGT antibody [1F9]  
(ab55138)

Overlay histogram showing HEK293 cells stained with ab55138 (red line). The cells were fixed with 4% paraformaldehyde (10 min) and incubated in 1x PBS / 10% normal goat serum / 0.3M glycine to block non-specific protein-protein interactions. The cells were then incubated with the antibody (ab55138, 1 µg/1x10<sup>6</sup> cells) for 30 min at 22°C. The secondary antibody used was DyLight® 488 goat anti-mouse IgG (H+L) (**ab96879**) at 1/500 dilution for 30 min at 22°C. Isotype control antibody (black line) was mouse IgG2a [ICIGG2A] (**ab91361**, 1 µg/1x10<sup>6</sup> cells) used under the same conditions.

Acquisition of >5,000 events was performed. This antibody gave a positive signal in HEK293 cells fixed with 100% methanol used under the same conditions.

Please note that Abcam do not have any data for use of this antibody on non-fixed cells. We welcome any customer feedback.

This image was generated using the ascites version of the product.

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

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