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Product datasheet

Anti-Fibrinogen alpha chain antibody [UC45] ab19079

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Overview

Product name	Anti-Fibrinogen alpha chain antibody [UC45]
Description	Mouse monoclonal [UC45] to Fibrinogen alpha chain
Host species	Mouse
Specificity	This antibody reacts very strongly with the alpha chain of human fibrinogen, for further information please see Hogg 1983 paper quoted.
Tested applications	**Suitable for:** ICC, Flow Cyt, RIA, ELISA
Species reactivity	**Reacts with:** Mouse, Rat, Human
Immunogen	Human acute monoblastic leukemia cells.
General notes	A monocyte and neuronal antigen present predominantly on a protein of 45kDa MW. UC45 is specific for monocytic leukemias. The relevant antigens are not expressed in all cases with monocytic differentiation.

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C or -80°C. Avoid freeze / thaw cycle.
Storage buffer	Constituent: PBS
Purity	Immunogen affinity purified
Purification notes	Purified from tissue culture supernatant.
Primary antibody notes	A monocyte and neuronal antigen present predominantly on a protein of 45kDa MW. UC45 is specific for monocytic leukemias. The relevant antigens are not expressed in all cases with monocytic differentiation.
Clonality	Monoclonal
Clone number	UC45
Myeloma	P3-NS1/1-Ag4-1
Isotype	IgM

Applications

Our Abpromise guarantee covers the use of **ab19079** 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
ICC		Use at an assay dependent concentration.
Flow Cyt		Use 1µg for 10^6 cells. ab91545 - Mouse monoclonal IgM, is suitable for use as an isotype control with this antibody.
RIA		Use at an assay dependent concentration.
ELISA		Use at an assay dependent concentration. PubMed: 24959311

Target

Function
Fibrinogen has a double function: yielding monomers that polymerize into fibrin and acting as a cofactor in platelet aggregation.

Tissue specificity
Plasma.

Involvement in disease
Defects in FGA are a cause of congenital afibrinogenemia (CAFBN) [MIM:202400]. This is a rare autosomal recessive disorder characterized by bleeding that varies from mild to severe and by complete absence or extremely low levels of plasma and platelet fibrinogen. Note=The majority of cases of afibrinogenemia are due to truncating mutations. Variations in position Arg-35 (the site of cleavage of fibrinopeptide a by thrombin) leads to alpha-dysfibrinogenemias.
Defects in FGA are a cause of amyloidosis type 8 (AMYL8) [MIM:105200]; also known as systemic non-neuropathic amyloidosis or Ostertag-type amyloidosis. AMYL8 is a hereditary generalized amyloidosis due to deposition of apolipoprotein A1, fibrinogen and lysozyme amyloids. Viscera are particularly affected. There is no involvement of the nervous system. Clinical features include renal amyloidosis resulting in nephrotic syndrome, arterial hypertension, hepatosplenomegaly, cholestasis, petechial skin rash.

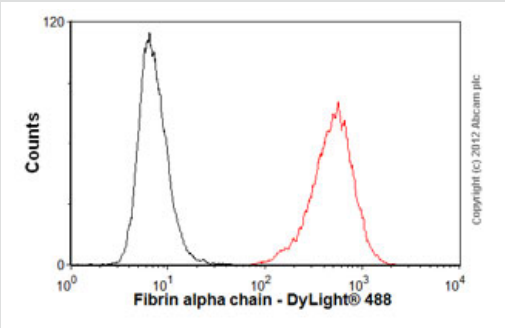
Sequence similarities
Contains 1 fibrinogen C-terminal domain.

Domain
A long coiled coil structure formed by 3 polypeptide chains connects the central nodule to the C-terminal domains (distal nodules). The long C-terminal ends of the alpha chains fold back, contributing a fourth strand to the coiled coil structure.

Post-translational modifications
The alpha chain is not glycosylated.
Forms F13A-mediated cross-links between a glutamine and the epsilon-amino group of a lysine residue, forming fibronectin-fibrinogen heteropolymers.
About one-third of the alpha chains in the molecules in blood were found to be phosphorylated.
Conversion of fibrinogen to fibrin is triggered by thrombin, which cleaves fibrinopeptides A and B from alpha and beta chains, and thus exposes the N-terminal polymerization sites responsible for the formation of the soft clot. The soft clot is converted into the hard clot by factor XIIIA which catalyzes the epsilon-(gamma-glutamyl)lysine cross-linking between gamma chains (stronger) and between alpha chains (weaker) of different monomers.
Phosphorylation sites are present in the extracelllular medium.

Cellular localization
Secreted.

Images



Flow Cytometry - Anti-Fibrinogen alpha chain antibody [UC45] (ab19079)

Overlay histogram showing THP1 cells stained with ab19079 (red line). The cells were fixed with 80% methanol (5 min) and then permeabilized with 0.1% PBS-Tween for 20 min. The cells were then incubated in 1x PBS / 10% normal goat serum / 0.3M glycine to block non-specific protein-protein interactions followed by the antibody (ab19079, 1µg/1x10^6 cells) for 30 min at 22ºC. The secondary antibody used was DyLight® 488 goat anti-mouse IgM (mu chain) (ab97007) at 1/500 dilution for 30 min at 22ºC. Isotype control antibody (black line) was mouse IgM [ICIGM] (ab91545, 2µg/1x10^6 cells) used under the same conditions. Acquisition of >5,000 events was performed.

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