abcam

ab150121

Goat Anti-Mouse IgM mu chain (Alexa Fluor® 488)

Goat Anti-Mouse IgM Mu chain (Alexa Fluor® 488)(ab150121) is a secondary antibody with a maximum absorption wavelength of 495 nm and a maximum emission wavelength of 519 nm. Ideal for fluorescent cell and tissue imaging. Suitable for IHC, ICC/IF, Flow Cytometry and ELISA.

- Minimal spectral overlap with other Alexa Fluor® dyes makes this ideal for use in multi-color analysis
- Proven performance: cited in over 50 publications

Key facts

Description	Goat Anti-Mouse IgM mu chain (Alexa Fluor® 488)
Host species	Goat
Target species	Mouse
Target isotype	IgM
Target specificity	Mu chain
Conjugation	Alexa Fluor® 488
Excitation/Emission	Ex: 495nm, Em: 519nm
Applications	ELISA, IHC-Fr, IHC-P, Flow Cyt, ICC/IF
Clonality	Polyclonal
Pre-adsorbed	No
Isotype	IgG
Concentration	2 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

Application	ELISA

Reactivity	Reacts
Dilution info	-
Notes	-

Application	IHC-Fr
Reactivity	Reacts
Dilution info	-
Notes	-

Application	IHC-P
Reactivity	Reacts
Dilution info	-
Notes	-

Application	Flow Cyt
Reactivity	Reacts
Dilution info	1/2000
Notes	-

Application	ICC/IF
Reactivity	Reacts
Dilution info	1-2 µg/mL
Notes	-

Properties

Form	Liquid
Storage buffer	Preservative: 0.02% Sodium azide Constituents: PBS, 23% Glycerol (glycerin, glycerine), 1% BSA
Purification technique	Affinity purification Immunogen
Purification notes	Antiserum was solid phase adsorbed to ensure class specificity. This antibody was isolated by affinity chromatography using antigen coupled to agarose beads.

Target data

See full target information Ighm

Function	Constant region of immunoglobulin heavy chains. Immunoglobulins, also known as antibodies, are membrane-bound or secreted glycoproteins produced by B lymphocytes. In the recognition phase of humoral immunity, the membrane-bound immunoglobulins serve as receptors which, upon binding of a specific antigen, trigger the clonal expansion and differentiation of B lymphocytes into immunoglobulins-secreting plasma cells. Secreted immunoglobulins mediate the effector phase of humoral immunity, which results in the elimination of bound antigens (By similarity). The antigen binding site is formed by the variable domain of one heavy chain, together with that of its associated light chain. Thus, each immunoglobulin has two antigen binding sites with remarkable affinity for a particular antigen. The variable domains are assembled by a process called V-(D)-J rearrangement and can then be subjected to somatic hypermutations which, after exposure to antigen and selection, allow affinity maturation for a particular antigen (By similarity). Isoform 1. Constant region of secreted IgM (sIgM), also known as the Fc region of IgM antibody. Able to multimerize, forms high order polymers, mainly pentamers and occasionally hexamers, providing for multivalency and high avidity recognition of antigens (By similarity). Natural sIgM are polyreactive and recognize conserved self- and pathogen-derived structures, whereas immune sIgM are secreted only upon exposure to pathogens and are antigen-specific. Both natural and immune sIgM are required for an efficient humoral immune response to infection (PubMed:10899913, PubMed:28135254, PubMed:34788614). Mediates sIgM effector functions mostly via Fc receptors and the complement system. On lymphoid cells binds high-affinity Fc receptor FCMR and promotes induction of an efficient neutralizing IgG response while maintaining tolerance to self-antigens. Recruits C1q complement component to initiate the classical complement pathway, facilitating the recognition and neutralization of pathogens by the host. Together with C1q and mannose-binding lectin promotes the phagocytosis of apoptotic cells by macrophages, ensuring the clearance of potential autoimmune epitopes from tissues (By similarity) (PubMed:10899913, PubMed:11062505, PubMed:28135254). Involved in mucosal immunity. It is transported by transcytosis across mucosal epithelium by PIGR and secreted on the apical side in complex with PIGR secretory component to scan mucosal lining for pathogens. IgM-antigen complexes undergo FCMR-mediated retrotranscytosis across mucosal M cells toward antigen-presenting cells in mucosal lymphoid tissues (PubMed:34788614). Isoform 2. Constant region of membrane-bound IgM, part of the B cell receptor complex (BCR). IgM BCR provides constitutive tonic signaling for B cell survival. Mediates pre-BCR signaling that regulates B cell selection and rearrangement of Ig genes via allelic exclusion.

Storage

Shipped at conditions	Blue Ice
Appropriate short-term storage duration	1-2 weeks
Appropriate short-term storage conditions	+4°C

Appropriate long-term storage conditions	-20°C
Aliquoting information	Upon delivery aliquot
Storage information	Avoid freeze / thaw cycle, Stable for 12 months at -20°C, Store in the dark

Notes

Alexa Fluor® is a registered trademark of Molecular Probes, Inc, a Thermo Fisher Scientific Company. The Alexa Fluor® dye included in this product is provided under an intellectual property license from Life Technologies Corporation. As this product contains the Alexa Fluor® dye, the purchase of this product conveys to the buyer the non-transferable right to use the purchased product and components of the product only in research conducted by the buyer (whether the buyer is an academic or for-profit entity). As this product contains the Alexa Fluor® dye the sale of this product is expressly conditioned on the buyer not using the product or its components, or any materials made using the product or its components, in any activity to generate revenue, which may include, but is not limited to use of the product or its components: in manufacturing; (ii) to provide a service, information, or data in return for payment (iii) for therapeutic, diagnostic or prophylactic purposes; or (iv) for resale, regardless of whether they are sold for use in research. For information on purchasing a license to this product for purposes other than research, contact Life Technologies Corporation, 5781 Van Allen Way, Carlsbad, CA 92008 USA or outlicensing@thermofisher.com.

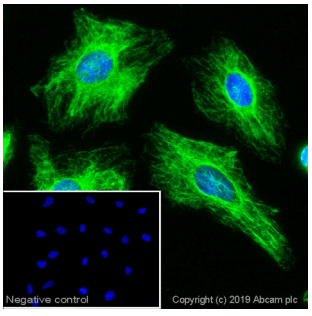
Product promise

We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

In the unlikely event of one of our products not working as expected, you are covered by our product promise.

Full details and terms and conditions can be found here:
Terms & Conditions.

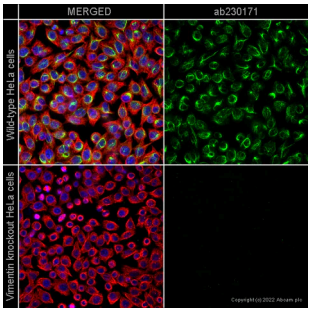
5 product images



Immunocytochemistry/ Immunofluorescence - Goat Anti-Mouse IgM mu chain (Alexa Fluor® 488) (ab150121)

ICC/IF image of ab20346 stained HeLa cells. The cells were 4% formaldehyde fixed (10 min), permeabilized with 0.1% Triton X-100 for 5 minutes and then incubated in 1% BSA / 10% normal goat serum / 0.3M glycine in 0.1% PBS-Tween for 1h to block non-specific protein-protein interactions. The cells were then incubated overnight at +4°C with ab20346 at 1/500 dilution. The secondary antibody (green) was ab150121 used at 2µg/ml for 1h. DAPI was used to stain the cell nuclei (blue) at a concentration of 1.43µM.

The negative control (inset) is a secondary-only assay to demonstrate low non-specific binding of the secondary antibody.

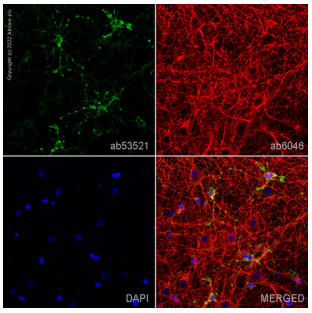


Immunocytochemistry/ Immunofluorescence - Goat Anti-Mouse IgM mu chain (Alexa Fluor® 488) (ab150121)

ab230171 staining Vimentin in HeLa-VIM cells. The cells were fixed with 4% paraformaldehyde (10 min), permeabilized with 0.1% PBS-Triton X-100 for 5 minutes and then blocked with 1% BSA/10% normal goat serum/0.3M glycine in 0.1%PBS-Tween for 1h. The cells were then incubated overnight at 4°C with ab230171 at 1µg/ml and ab6046. Cells were then incubated with ab150121 at 1/1000 dilution (shown in green) and ab150080 at 1/1000 dilution (shown in pseudocolour red). Nuclear DNA was labelled with DAPI (shown in blue).

Also suitable in cells fixed with 100% methanol (5 min).

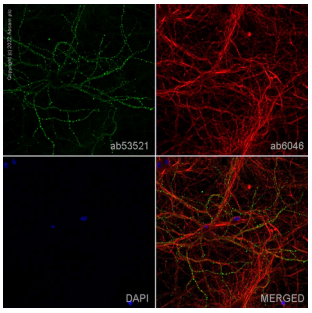
Image was acquired with a high-content analyser (Operetta CLS, Perkin Elmer) and a maximum intensity projection of confocal sections is shown.



Immunocytochemistry/ Immunofluorescence - Goat Anti-Mouse IgM mu chain (Alexa Fluor® 488) (ab150121)

ab53521 staining A2B5 in primary rat neurons/glia, DIV14 (prepared from E18 rat hippocampal brain area, obtained from Transnetyx Tissue by BrainBits, LLC, cat.no. SDHEP) cells. The cells were fixed with 4% paraformaldehyde (10 min), permeabilized with 0.1% PBS-Tween for 5 minutes and then blocked with 1% BSA/10% normal goat serum/0.3M glycine in 0.1%PBS-Tween for 1h. The cells were then incubated overnight at 4°C with ab53521 at 1µg/ml and ab6046. Cells were then incubated with ab150121 at 1/1000 dilution (shown in green) and ab150080 at 1/1000 dilution (shown in pseudocolour red). Nuclear DNA was labelled with DAPI (shown in blue).

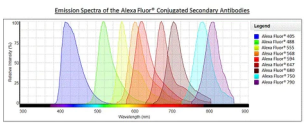
Image was acquired with a confocal microscope (Leica-Microsystems TCS SP8) and a single confocal section is shown.



Immunocytochemistry/ Immunofluorescence - Goat Anti-Mouse IgM mu chain (Alexa Fluor® 488) (ab150121)

ab53521 staining A2B5 in primary mouse neurons/glia, DIV14 (prepared from E18 mouse hippocampal brain area, obtained from Transnetyx Tissue by BrainBits, LLC, cat.no. C57EHP) cells. The cells were fixed with 4% paraformaldehyde (10 min), permeabilized with 0.1% PBS-Tween for 5 minutes and then blocked with 1% BSA/10% normal goat serum/0.3M glycine in 0.1% PBS-Tween for 1h. The cells were then incubated overnight at 4°C with ab53521 at 1µg/ml and ab6046. Cells were then incubated with ab150121 at 1/1000 dilution (shown in green) and ab150080 at 1/1000 dilution (shown in pseudocolour red). Nuclear DNA was labelled with DAPI (shown in blue).

Image was acquired with a confocal microscope (Leica-Microsystems TCS SP8) and a single confocal section is shown.



Alexa Fluor® - Goat Anti-Mouse IgM mu chain (Alexa Fluor® 488) (ab150121)

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.