abcam

ab106163

FITC Mouse IgG1 kappa [MOPC-21] - Isotype Control

Mouse IgG1 kappa isotype control conjugated to FITC - suitable for flow cytometry, IHC-Fr, IHC-P, IP, Western blot. Clone [MOPC-21] is a mouse monoclonal isotype control.

Design your panel with our interactive flow cytometry panel builder. Click here.

Key facts

Isotype	IgG1
Host species	Mouse
Conjugation	FITC
Excitation/Emission	Ex: 495nm, Em: 519nm
Storage buffer	pH: 7.4 Preservative: 0.097% Sodium azide Constituents: PBS
Form	Liquid
Clonality	Monoclonal
Clone number	MOPC-21
Purification technique	Affinity purification Protein G
Specificity	ab106163 (clone MOPC-21) has unknown specificity and was chosen as an isotype control after screening on variety of resting, activated, live and fixed Rat and Human tissues.
Light chain type	kappa
Concentration	1 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →
Purification notes	> 95% (by SDS-PAGE)

Reactivity data

Application	Flow Cyt
Reactivity	Reacts
Dilution info	-
Notes	-

Target data

See full target information IGHG4

Function

Constant region of immunoglobulin (Ig) heavy chains. Igs are membrane-bound or secreted glycoproteins produced by B lymphocytes. In the recognition phase of humoral immunity, the membrane-bound Igs serve as receptors, which upon binding to a specific antigen trigger the clonal expansion and differentiation of B lymphocytes into Ig-secreting plasma cells. Secreted Igs known as antibodies mediate the effector phase of humoral immunity by blocking the interaction of infectious antigens with cellular receptors (via the antigen-binding region) and eliciting effector mechanisms that lead to pathogen neutralization (via the constant region) (PubMed:17576170, PubMed:20176268, PubMed:22158414). The antigen-binding region is formed by the variable domain of one heavy chain paired with the variable domain of its associated light chain. Each Ig molecule has two antigen-binding sites with remarkable affinity for a particular antigen due to V-(D)-J rearrangement, somatic hypermutations and affinity maturation of the variable domains upon antigen exposure (PubMed:17576170, PubMed:20176268, PubMed:22158414). The constant region defines the Ig isotype that perform distinct sets of effector functions. B cells diversify and rearrange their Ig constant regions through class-switch recombination, a process by which the constant region is switched from one Ig isotype to another, namely from IgM and IgD to IgG, IgA and IgE (PubMed:17576170, PubMed:20176268, PubMed:22158414). The constant region interacts (via the fragment crystallizable, Fc) with the Fc receptors on innate immune cells to mediate humoral effector functions. Ig gamma-4 (IgG4) isotype does not elicit antibody-dependent cellular cytotoxicity (ADDC) or complement-dependent cytotoxicity (CDC). Instead it is likely involved in immune tolerance mechanisms to allergens and parasites either by blocking IgE-antigen complex formation or by directly inhibiting mast cell degranulation through Fc receptor signaling. In the context of tumorigenesis, it may participate in immunosuppressive mechanisms.

Storage

Shipped at conditions	Blue Ice

Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	+4°C
Storage information	Store in the dark

Notes

ab106163 is intended as isotype control for flow cytometry analysis to establish the amount of non-specific antibody binding. For your particular experiment, use the same concentration of this isotype control antibody as the recommended working concentration of the antigen-specific antibody. Also, when working with prediluted antibodies, dilute the isotype control to the same concentration as is the concentration of the antigen-specific antibody in the prediluted antibody solution you are using. If under particular experimental conditions the background signal of the isotype control is too high (usually when working concentrations of used antibodies are above 10 µg per ml of incubation mixture), change the conditions of your experiment to reduce the background.

Product promise

Tested

We have tested this species and application combination and it works. It is covered by our product promise.

Expected

We have not tested this specific species and application combination in-house, but expect it will work. It is covered by our product promise.

Predicted

This species and application combination has not been tested, but we predict it will work based on strong homology. However, this combination is not covered by our product promise.

Not recommended

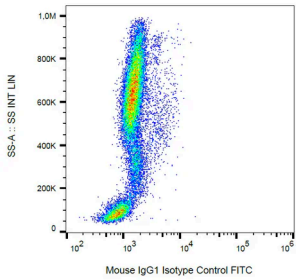
We do not recommend this combination. It is not covered by our product promise.

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.

1 product image



Flow Cytometry - FITC Mouse IgG1 kappa [MOPC-21] - Isotype Control (ab106163)

Flow Cytometry staining of Human peripheral blood cells using mouse Anti- antibody

Example of nonspecific mouse IgG1 (MOPC-21) FITC signal on human peripheral blood; surface staining, 9 µg/ml.

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