Human/Mouse/Rat FoxP3 Alexa Fluor® 647-conjugated Antibody

Recombinant Monoclonal Mouse IgG_1 Clone # 376209

Catalog Number: IC8970R
25 Tests, 100 Tests

DESCRIPTION

Species Reactivity	Human/Mouse/Rat
Specificity	Detects human FoxP3 in direct ELISAs. Detects human, mouse, and rat FoxP3 in flow cytometry.
Source	Recombinant Monoclonal Mouse IgG_1 Clone # 376209
Purification	Protein A or G purified from cell culture supernatant
Immunogen	*E. coli*-derived recombinant human FoxP3 Gln105-Lys200 Accession # Q9BZS1
Conjugate	Alexa Fluor 647 Excitation Wavelength: 650 nm Emission Wavelength: 668 nm
Formulation	Supplied in a saline solution containing BSA and Sodium Azide. See Certificate of Analysis for details. *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.

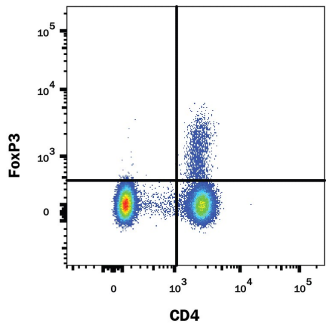
APPLICATIONS

Please Note: *Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.*

	Recommended Concentration	Sample
Intracellular Staining by Flow Cytometry	5 µL/10^6 cells	See Below

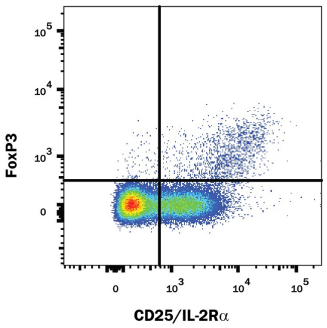
DATA

Intracellular Staining by Flow Cytometry



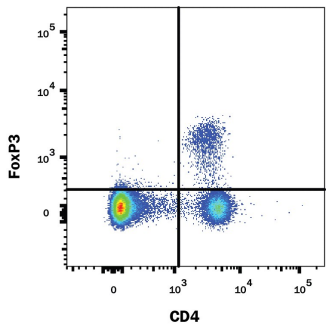
Detection of FoxP3 in Human PBMCs by Flow Cytometry. Human peripheral blood mononuclear cells (PBMCs) were stained with Mouse Anti-Human/Mouse/Rat FoxP3 Alexa Fluor® 647-conjugated Monoclonal Antibody (Catalog # IC8970R) and Mouse Anti-Human CD4 Fluorescein-conjugated Monoclonal Antibody (Catalog # FAB3791F). Quadrant markers were set based on control antibody staining (Catalog # IC002R). To facilitate intracellular staining, cells were fixed and permeabilized with FlowX FoxP3 Fixation & Permeabilization Buffer Kit (Catalog # FC012). View our protocol for Staining Intracellular Molecules.

Intracellular Staining by Flow Cytometry



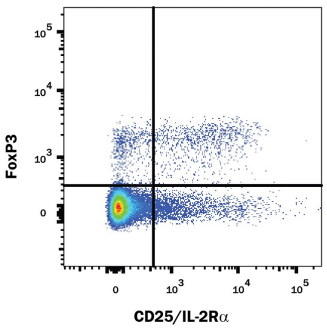
Detection of FoxP3 in Human PBMCs by Flow Cytometry. Human peripheral blood mononuclear cells (PBMCs) were stained with Mouse Anti-Human/Mouse/Rat FoxP3 Alexa Fluor® 647-conjugated Monoclonal Antibody (Catalog # IC8970R) and Mouse Anti-Human CD25/IL-2 R alpha PE-conjugated Monoclonal Antibody (Catalog # FAB1020P). Quadrant markers were set based on control antibody staining (Catalog # IC002R). To facilitate intracellular staining, cells were fixed and permeabilized with FlowX FoxP3 Fixation & Permeabilization Buffer Kit (Catalog # FC012). View our protocol for Staining Intracellular Molecules.

Intracellular Staining by Flow Cytometry



Detection of FoxP3 in Mouse Splenocytes by Flow Cytometry. Mouse splenocytes were stained with Mouse Anti-Human/Mouse/Rat FoxP3 Alexa Fluor® 647-conjugated Monoclonal Antibody (Catalog # IC8970R) and Rat Anti-Mouse CD4 Alexa Fluor® 488-conjugated Monoclonal Antibody (Catalog # FAB554G). Quadrant markers were set based on control antibody staining (Catalog # IC002R). To facilitate intracellular staining, cells were fixed and permeabilized with FlowX FoxP3 Fixation & Permeabilization Buffer Kit (Catalog # FC012). View our protocol for Staining Intracellular Molecules.

Intracellular Staining by Flow Cytometry



Detection of FoxP3 in Mouse Splenocytes by Flow Cytometry. Mouse splenocytes were stained with Mouse Anti-Human/Mouse/Rat FoxP3 Alexa Fluor® 647-conjugated Monoclonal Antibody (Catalog # IC8970R) and Rat Anti-Mouse CD25/IL-2 R alpha PE-conjugated Monoclonal Antibody (Catalog # FAB2438P). Quadrant markers were set based on control antibody staining (Catalog # IC002R). To facilitate intracellular staining, cells were fixed and permeabilized with FlowX FoxP3 Fixation & Permeabilization Buffer Kit (Catalog # FC012). View our protocol for Staining Intracellular Molecules.

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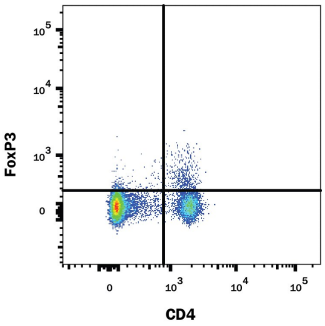
Intracellular Staining by Flow Cytometry



Detection of FoxP3 in Rat Splenocytes by Flow Cytometry. Rat splenocytes were stained with Mouse Anti-Human/Mouse/Rat FoxP3 Alexa Fluor® 647-conjugated Monoclonal Antibody (Catalog # IC8970R) and Anti-Rat CD4 APC-conjugated Antibody. Quadrant markers were set based on control antibody staining (Catalog # IC002R). To facilitate intracellular staining, cells were fixed and permeabilized with FlowX FoxP3 Fixation & Permeabilization Buffer Kit (Catalog # FC012). View our protocol for Staining Intracellular Molecules.

PREPARATION AND STORAGE

Shipping	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	**Protect from light. Do not freeze.** ● 12 months from date of receipt, 2 to 8 °C as supplied.

BACKGROUND

Human FoxP3 is a 431 amino acid (aa), 47 kDa member of the P subclass of the FOX (forkhead box) family of transcription factors. It contains a Leu-rich repeat, a C2H2 zinc finger region, and a C-terminal FKH (fork head), DNA-binding domain. Three alternative splicing events have been described in human. The first shows a deletion of aa 72-106, a second exhibits a deletion of aa 246-272, and a third records a 60 aa insertion after Lys382. These events are likely not to be mutually exclusive. The first isoform (plus the full-length form) occurs in $CD4^+CD25^+$ T cells, while the less frequent second isoform appears in $CD8^+$ Tregs. The mouse FoxP3 gene does not appear to be spliced. In addition, FoxP3 is found only in Tregs in mouse, while human FoxP3 appears in both Tregs and $CD4^+$ and $CD8^+$ conventional T cells.

Both mouse and human FoxP3 undergo proteolytic processing, after Arg51 and Arg417 in human, and at equivalent sites in mouse. Cleavage at the N-terminus generate a 41 kDa isoform, whereas C-terminal cleavage generates an isoform indistinguishable from the full-length isoform (47 kDa) in SDS-PAGE.

FoxP3 can act as a transcriptional repressor (for IL-2) via an interaction with HDAC7. By contrast, it can also act as a transcriptional activator (for GITRL and CTLA-4) through an interaction with RUNX7. Notably, for both human and mouse, full-length 47 kDa FoxP3 will induce high levels of CTLA-4 on expressing cells. However, when the C-terminally truncated isoform (at Arg417) is considered, IL-10 promoting activity is enhanced in mouse, while suppressive activity is lost in human. Over aa 105-200, human FoxP3 shares 83% and 84% aa sequence identity with rat and mouse FoxP3, respectively.

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