Human/Mouse/Rat Fc mu R/FAIM3 Antibody

Monoclonal Mouse IgG_{2B} Clone # 992338

Catalog Number: MAB9494

DESCRIPTION

Species Reactivity	Human/Mouse/Rat
Specificity	Detects human Fc mu R/FAIM3 in direct ELISAs. Detects human, mouse, and rat Fc mu R/FAIM3 in Western blots.
Source	Monoclonal Mouse IgG_{2B} Clone # 992338
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Human embryonic kidney cell line HEK293-derived recombinant human Fc mu R/FAIM3 Arg18-Gly251 Accession # O60667
Formulation	Lyophilized from a 0.2 μm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied either lyophilized or as a 0.2 μm filtered solution in PBS.

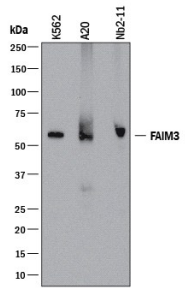
APPLICATIONS

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
Western Blot	2 µg/mL	See Below
Flow Cytometry	0.25 µg/10^6 cells	See Below
CyTOF-ready	Ready to be labeled using established conjugation methods. No BSA or other carrier proteins that could interfere with conjugation.	

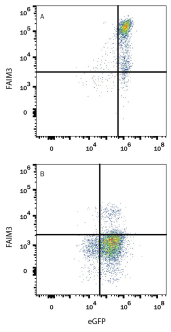
DATA

Western Blot



Detection of Human, Mouse, and Rat Fc mu R/FAIM3 by Western Blot. Western blot shows lysates of K562 human chronic myelogenous leukemia cell line, A20 mouse B cell lymphoma cell line, and Nb2-11 rat lymphoma cell line. PVDF membrane was probed with 2 µg/mL of Mouse Anti-Human/Mouse/Rat Fc mu R/FAIM3 Monoclonal Antibody (Catalog # MAB9494) followed by HRP-conjugated Anti-Mouse IgG Secondary Antibody (Catalog # HAF018). A specific band was detected for Fc mu R/FAIM3 at approximately 60 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 1.

Flow Cytometry



Detection of FAIM3 in HEK293 Human Cell Line Transfected with Human FAIM3 and eGFP by Flow Cytometry. HEK293 human embryonic kidney cell line transfected with (A) human FAIM3 or (B) irrelevant transfectants and eGFP was stained with Mouse Anti-Human/Mouse/Rat FAIM3 Monoclonal Antibody (Catalog # MAB9494) followed by APC-conjugated Anti-Mouse IgG Secondary Antibody (Catalog # F0101B). Quadrant markers were set based on control antibody staining (Catalog # MAB0041). View our protocol for Staining Membrane-associated Proteins.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.5 mg/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
Stability & Storage	**Use a manual defrost freezer and avoid repeated freeze-thaw cycles.** ● 12 months from date of receipt, -20 to -70 °C as supplied. ● 1 month, 2 to 8 °C under sterile conditions after reconstitution. ● 6 months, -20 to -70 °C under sterile conditions after reconstitution.

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BACKGROUND

The human *FAIM3* gene (also known as FCMR or TOSO), is a transmembrane sialoglycoprotein expressed mainly by lymphocytes. FAIM3 is a type I membrane protein with an intracellular C-terminal domain and an extracellular N-terminal domain (1). The extracellular domain has homology to the immunoglobulin variable region domains (1) and FAIM3 is identified as an Fc receptor for IgM (2, 3). The amino acid sequence of human FAIM3 is 58% and 55% identical to that of mouse and rat FAIM3, respectively. FAIM3 was shown to be over-expressed in chronic lymphocytic leukemia (CLL) (4) and associated with disease progression (5, 6). FAIM3 has also been linked to the homeostasis and activation of the innate immune system (7). Interestingly, there is growing evidence that neurodegenerative diseases are associated with the activation of the immune surveillance system. This system is responsible for controlling danger signals and responding accordingly to the magnitude and duration of the threat (8, 9).

References:

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6. Pallasch, C P *et al* (2009) Leukemia & lymphoma, **50**:498.
7. Sigruener, A *et al* (2007) Biochemical and biophysical research communications, **359**:723.
8. Richards R I *et al* (2016) Front. Neurosci. **10**:193.
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