Mouse KLRG1
Alexa Fluor® 405-conjugated Antibody

Monoclonal Rabbit IgG Clone # 1151A
Catalog Number: FAB6944V
100 µg

DESCRIPTION

Species Reactivity	Mouse
Specificity	Detects mouse KLRG1 in flow cytometry.
Source	Monoclonal Rabbit IgG Clone # 1151A
Purification	Protein A or G purified from cell culture supernatant
Immunogen	Chinese hamster ovary cell line CHO-derived mouse KLRG1 Glu57-Tyr188 Accession # O88713
Conjugate	Alexa Fluor 405 Excitation Wavelength: 405 nm Emission Wavelength: 421 nm
Formulation	Supplied 0.2 mg/mL 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
Flow Cytometry	0.25-1 µg/10^6 cells	Mouse splenocytes

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

KLRG1 (Killer cell Lectin-like Receptor G1), also called MAFA (Mast cell Function Associated), is an inhibitory type II transmembrane glycoprotein of the C-type lectin family, designated CLEC15A (1). Mature mouse KLRG1 consists of a 33 amino acid (aa) cytoplasmic domain with one Immunoreceptor Tyrosine-based Inhibitory Motif (ITIM), a 23 aa transmembrane segment, and a 132 aa extracellular domain (ECD) with one C-type lectin domain (CTLD) (2). Within the ECD, mouse KLRG1 shares 57% and 80% aa sequence identity with human and rat KLRG1, respectively. Alternate splicing generates additional isoforms of mouse KLRG1 that lack either the CTLD or the CTLD, transmembrane segment, and a portion of the cytoplasmic domain (3). KLRG1 is expressed as a 30 - 40 kDa N-glycosylated molecule that forms disulfide-linked homodimers, trimers, and tetramers (4, 5). It is expressed on subpopulations of $CD8^+$, $CD4^+$, regulatory, and gamma/delta T cells as well as on NK cells (2, 4, 6 - 8). KLRG1 is expressed on T cells found in cord blood, but it is down-regulated postnatally and is subsequently re-expressed on antigen-exposed T cells (7, 9). It is expressed by a greater proportion of $CD8^+$ T cells in the elderly and by virus-specific $CD8^+$ T cells during chronic virus infection (10 - 12). KLRG1 binds to E-, N-, and R-Cadherins, triggering ITIM-dependent KLRG1 signaling and inhibition of T cell activation (5, 13, 14). The response is bi-directional, as KLRG1 binding to E-Cadherin on dendritic cells (DC) can induce an anti-inflammatory DC phenotype (increased IL-10 production and decreased IL-6 and TNF-α production) (15).

References:

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