

DESCRIPTION

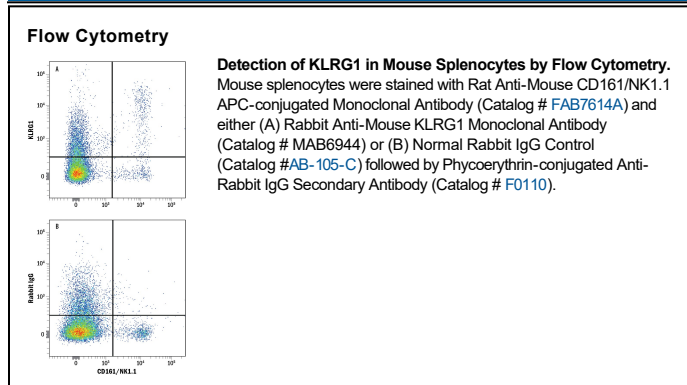
| | |
|---------------------------|---|
| Species Reactivity | Mouse |
| Specificity | Detects mouse KLRG1 in flow cytometry. |
| Source | Recombinant Monoclonal Rabbit IgG Clone # 1151A |
| Purification | Protein A or G purified from cell culture supernatant |
| Immunogen | Chinese hamster ovary cell line CHO-derived mouse KLRG1 Glu57-Tyr188 Accession # O88713 |
| Formulation | Supplied as a solution in PBS containing BSA, Glycerol and Sodium Azide. 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 |
|-----------------------|----------------------------------|---------------|
| Flow Cytometry | 0.5 µL/10 ⁶ cells | See Below |

DATA



PREPARATION AND STORAGE

| | |
|--------------------------------|---|
| Shipping | The product is shipped with polar packs. 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. <ul style="list-style-type: none"> ● 12 months from date of receipt, -20 to -70 °C, as supplied. ● 1 month, 2 to 8 °C under sterile conditions after opening. ● 6 months, -20 to -70 °C under sterile conditions after opening. |

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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4. Corral, L. *et al.* (2000) *Eur. J. Immunol.* **30**:920.
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6. Voehringer, D. *et al.* (2002) *Blood* **100**:3698.
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9. Marcolino, I. *et al.* (2004) *Eur. J. Immunol.* **34**:2672.
10. Ouyang, Q. *et al.* (2003) *Exp. Gerontol.* **38**:911.
11. Thimme, R. *et al.* (2005) *J. Virol.* **79**:12112.
12. Cush, S.S. and E. Flano (2011) *J. Immunol.* **186**:4051.
13. Ito, M. *et al.* (2006) *J. Exp. Med.* **203**:289.
14. Tessmer, M.S. *et al.* (2007) *Int. Immunol.* **19**:391.
15. Banh, C. *et al.* (2009) *Blood* **114**:5299.

PRODUCT SPECIFIC NOTICES

* Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to SDS for additional information and handling instructions.