invitrogen™ | MOLECULAR PROBES®

# PRODUCT INSERT

## MONOCLONAL ANTIBODY TO THE MOUSE KLRG1 ANTIGEN

| Product | Form | Volume | Antibody* | Excitation (nm) | Peak Emission (nm) | Matching Isotype Controls | |
|---|---|---|---|---|---|---|---|
| HMKLRG101 | FITC | 1.0 ml | 500 µg | 488 | 525 | Hamster IgG FITC | HM01 |
| HMKLRG104 | R-PE | 1.0 ml | 100 µg | 488 | 575 | Hamster IgG R-PE | HM04 |

### PRODUCT DESCRIPTION

Hamster monoclonal antibody to the mouse KLRG1 antigen

**Clone:** 2F1

**Isotype:** Syrian Hamster IgG

**Lot No.:** See label **Expiration:** See label

**Buffer:** Phosphate buffered saline (PBS)

**Preservatives:** 0.1% ***sodium azide.*** Sodium azide is an extremely toxic and dangerous compound particularly when combined with acids or metals. Solutions containing sodium azide should be disposed of properly.

**Stabilizer:** Sucrose.

### PRODUCT CHARACTERIZATION

**Antigen Specificity:** The monoclonal antibody 2F1 reacts with mouse killer cell lectin-like receptor G1 (KLRG1; formerly known as mouse MAFA or 2F1-Ag), a homodimeric member of the lectin-like type 2 transmembrane receptor family that contain characteristic immunoreceptor tyrosine-based inhibitory motifs (ITIMs) in their cytoplasmic domains.[1,2] These ITIMs interact with the SH2 domains of protein phosphatases such as SHP-1.[3,4] The 2F1 antibody stains 30-60% of $NK1.1^{+}CD3^{-}$ splenocytes, and a small fraction of T cells in all mouse strains tested (C57BL/6, BALB/c, 129/J, C3H.SW, AKR/J, SJL).[1,5] Cell surface expression of KLRG1 is up-regulated by expression of MHC class I molecules. The effect of MHC class I expression is indirect, and can be mediated by interactions with class I-specific Ly49 inhibitory receptors.[1]

**Research Applications:**

- Flow cytometry [1,5]
- Immunoprecipitation [1,5]

**Note:** Flow cytometric data shown may not necessarily have been generated using the enclosed lot of reagent. For this reason, and due to differences in flow cytometers and cytometer settings, results may vary from those illustrated above. It is suggested that investigators titrate reagents to determine optimal conditions for use in their systems.

### STORAGE & HANDLING

Store reagents at 2-8°C. Light exposure should be avoided for fluorochrome-conjugated reagents. Use dim light during handling, incubation with cells and prior to analysis. It is recommended that cells be analyzed within 18 hours of staining. If the reagent is being diluted, it is recommended that only the quantity to be used within one week be diluted.

### PRODUCT QUALITY CONTROL

To ensure lot-to-lot consistency, each batch of monoclonal antibody is tested by flow cytometry to conform to characteristics of a standard reference reagent. From this testing it is recommended that between 0.1 and 0.2 µg of antibody be used per 1 x $10^6$ cells in a 100 µl staining volume. Because conditions may vary, it is recommended that each investigator determine the optimal amount of antibody to be used for each application.

* The amount of antibody is determined by measuring the optical density using a spectrophotometer. The antibody titer is verified by immunofluorescent staining and flow cytometric analysis.

### REFERENCES:


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2. Hanke, T., L. Corral, R.E., Vance, and D.H. Raulet. 1998. 28:4409.
3. Burshtyn, D., A. Scharenberg, N. Wagtmann, S. Rajagopalan, M. Peruzzi, J.-P. Kinet, and E.O. Long. 1997. *Immunity* 4:77.
4. Nakamura, M.C., E.C. Niemi, M.J. Fisher, L.D. Schultz, W.E. Seaman, and J.C. Ryan. 1997. *J. Exp. Med.* 185:673.
5. Liu, S., and D.H. Raulet. Personal communication.





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