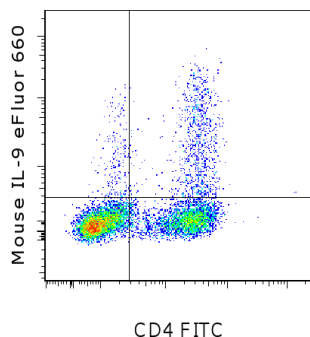


## Anti-Mouse IL-9 eFluor® 660 (Alexa Fluor® 647 Replacement)

**Catalog Number:** 50-8091

**Also known as:** Interleukin-9, Cytokine P40

**RUO: For Research Use Only. Not for use in diagnostic procedures.**



BALB/c splenocytes were cultured with plate-bound Anti-Mouse CD3e Functional Grade Purified (cat. 16-0031), Anti-Mouse CD28 Functional Grade Purified (cat. 16-0281), Mouse IL-4 Recombinant Protein (cat. 14-8041), and Human TGF beta 1 Recombinant Protein (cat. 14-8348) for 3 days, then cultured with Cell Stimulation Cocktail (plus protein transport inhibitors) (cat. 00-4975) for an additional 5 hours. Cells were stained intracellularly with Anti-Mouse CD4 FITC (cat. 11-0042) and 0.03 µg Anti-Mouse IL-9 eFluor 660. Total viable cells, as determined by Fixable Viability Dye eFluor 450 (cat. 65-0863), were used for analysis.

### Product Information

**Contents:** Anti-Mouse IL-9 eFluor® 660 (Alexa Fluor® 647 Replacement)

**Catalog Number:** 50-8091

**Clone:** RM9A4

**Concentration:** 0.2 mg/mL

**Host/Isotype:** Rat IgG1, kappa

**Formulation:** aqueous buffer, 0.09% sodium azide, may contain carrier protein/stabilizer

**Temperature Limitation:** Store at 2-8°C. Do not freeze. Light-sensitive material.

**Batch Code:** Refer to vial

**Use By:** Refer to vial

**Contains sodium azide**

### Description

This monoclonal RM9A4 antibody reacts with mouse Interleukin-9 (IL-9). IL-9 is a 14 kDa cytokine originally named P40 and identified by its proliferative effects on T cell populations. The receptor, which is a heterodimer of the gamma chain portion of the IL-2 receptor and the IL-9R chain, activates Jak/STAT signaling pathways upon binding its ligand. Since the discovery of IL-9, numerous other functions have been observed. It induces Th17 and Treg differentiation in CD4+ T cells, IgE production in B cells, and the differentiation and proliferation of mast cells. IL-9 expression was initially observed in Th2 cells, but has since been found in Th17, eosinophil, and mast cells. Th9 cells, a newly discovered subset of CD4+ T cells, are characterized by the secretion of large amounts of IL-9 and IL-10. Th9 development is induced by stimulation of undifferentiated CD4+ with IL-4 and TGF beta. Th2 cells can also be driven towards a Th9 phenotype in the presence of TGF beta.

### Applications Reported

This RM9A4 antibody has been reported for use in intracellular staining followed by flow cytometric analysis.

### Applications Tested

This RM9A4 antibody has been tested by intracellular staining followed by flow cytometric analysis of cultured mouse splenocytes. This can be used at less than or equal to 0.06 µg per test. A test is defined as the amount (µg) of antibody that will stain a cell sample in a final volume of 100 µL. Cell number should be determined empirically but can range from 10<sup>5</sup> to 10<sup>8</sup> cells/test. It is recommended that the antibody be carefully titrated for optimal performance in the assay of interest.

**eFluor® 660 is a replacement for Alexa Fluor® 647. eFluor® 660 emits at 659 nm and is excited with the red laser (633 nm). Please make sure that your instrument is capable of detecting this fluorochrome.**

### References

Stumhofer JS, Tait ED, Quinn WJ 3rd, Hosken N, Spudy B, Goenka R, Fielding CA, O'Hara AC, Chen Y, Jones ML, Saris CJ, Rose-John S, Cua DJ, Jones SA, Elloso MM, Grotzinger J, Cancro MP, Levin SD, Hunter CA. A Role for IL-27p28 as an antagonist of gp130-mediated signaling. *Nat Immunol.* 2010 Dec;11(12):1119-26.

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Stumhofer JS and Hunter CA. Advances in understanding the anti-inflammatory properties of IL-27. Immunol Lett. 2008 May 15; 117(2): 123-30.

Yoshimura A, Yoshida H, Miyazaki Y, Kinjyo I, Ishibashi T, Yoshimura T, Takeda A, Hamano S. Two sided roles of IL-27: induction of Th1 differentiation on Naïve CD4+ T cells versus suppression of proinflammatory cytokine production including IL-23-induced IL-17 on activated CD4+ T cells partially through STAT3-dependent mechanism. J Immunol. 2006; 177: 5377-85.

### **Related Products**

00-4975 Cell Stimulation Cocktail (plus protein transport inhibitors) (500X)

00-4980 Protein Transport Inhibitor Cocktail (500X)

11-0042 Anti-Mouse CD4 FITC (RM4-5)

14-8041 Mouse IL-4 Recombinant Protein

14-8348 Human TGF beta 1 Recombinant Protein

16-0031 Anti-Mouse CD3e Functional Grade Purified (145-2C11)

16-0281 Anti-Mouse CD28 Functional Grade Purified (37.51)

50-4301 Rat IgG1 K Isotype Control eFluor® 660

65-0863 Fixable Viability Dye eFluor® 450

88-8823 Fixation & Permeabilization Buffers