PE anti-IRF4 Antibody

Catalog# / Size	646403 / 25 µg 646404 / 100 µg
Clone	IRF4.3E4
Regulatory Status	RUO
Other Names	Interferon regulatory factor 4
Isotype	Rat IgG1, κ
Description	The IRF family consists of at least nine members. IRF4 and IRF8 are highly homologous to each other and also redundant in function. IRF4 is critical for Th2 and Th17 development. Together with TRF8, it plays an essential role in macrophage and dendritic cell development and function. IRF4 is also reported to be essential for pre-B cell development, receptor editing, germinal center reactor and plasma cell differentiation.

Product Details

Verified Reactivity	Mouse, Human
Antibody Type	Monoclonal
Host Species	Rat
Immunogen	GST fusion protein containing C-terminal of murine IRF4
Formulation	Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide.
Preparation	The antibody was purified by affinity chromatography and conjugated with PE under optimal conditions.
Concentration	0.2 mg/ml
Storage & Handling	The antibody solution should be stored undiluted between 2°C and 8°C, and protected from prolonged exposure to light. **Do not freeze.**
Application	ICFC - Quality tested SB - Reported in the literature, not verified in house
Recommended Usage	Each lot of this antibody is quality control tested by intracellular immunofluorescent staining with flow cytometric analysis. For flow cytometric staining, the suggested use of this reagent is ≤0.25 µg per million cells in 100 µl volume. It is recommended that the reagent be titrated for optimal performance for each application.
Excitation Laser	Blue Laser (488 nm) Green Laser (532 nm)/Yellow-Green Laser (561 nm)
Application Notes	Additional reported applications (for the relevant formats) include: spatial biology (IBEX)[3,4].
Additional Product Notes	Iterative Bleaching Extended multi-pleXity (IBEX) is a fluorescent imaging technique capable of highly-multiplexed spatial analysis. The method relies on cyclical bleaching of panels of fluorescent antibodies in order to image and analyze many markers over multiple cycles of staining, imaging, and, bleaching. It is a community-developed open-access method developed by the Center for Advanced Tissue Imaging (CAT-I) in the National Institute of Allergy and Infectious Diseases (NIAID, NIH).

Application References

(PubMed link indicates BioLegend citation)

1. Zheng Y, *et al.* 2009. *Nature* 458:351
2. Yin SY, *et al.* 2011. Exp Cell Res. 317:2210. PubMed
3. Radtke AJ, *et al.* 2020. *Proc Natl Acad Sci USA*. 117:33455-33465. (SB) PubMed
4. Radtke AJ, *et al.* 2022. *Nat Protoc*. 17:378-401. (SB) PubMed

Product Citations

1. Rivas MA, *et al.* 2021. Nat Immunol. 22:240. PubMed
2. Arnold J, *et al.* 2015. Cell Death Differ. 23: 853-864. PubMed

3. Webb LMC, *et al.* 2021. Aging Cell. 20:e13295. PubMed
4. Lee JL, *et al.* 2022. Aging Cell. 21:e13692. PubMed
5. Utley A, *et al.* 2020. Cell Rep. 31:107815. PubMed
6. Holly Bachus *et al.* 2018. Immunity. 50(1):225-240 . PubMed
7. Luo W *et al.* 2018. Immunity. 48(2):313-326 . PubMed
8. Leylek R, *et al.* 2019. Cell Rep. 29:3736. PubMed
9. Kurniawan H, *et al.* 2020. Cell Metabolism. 31(5):920-936. PubMed
10. Trefzer A, *et al.* 2021. Cell Reports. 34(6):108748. PubMed
11. Shih T, *et al.* 2019. Front Immunol. 10:1652. PubMed
12. Yang BH, *et al.* 2020. Cell Reports. 27(12):3629-3645.e6.. PubMed
13. Hering L, *et al.* 2020. Front Immunol. 1.747222222. PubMed
14. Szodoray P, *et al.* 2021. Cell Reports. 36(6):109525. PubMed
15. Lightman SM, *et al.* 2020. Cell Reports. 1.086805556. PubMed

RRID

AB_2563004 (BioLegend Cat. No. 646403)
AB_2563005 (BioLegend Cat. No. 646404)

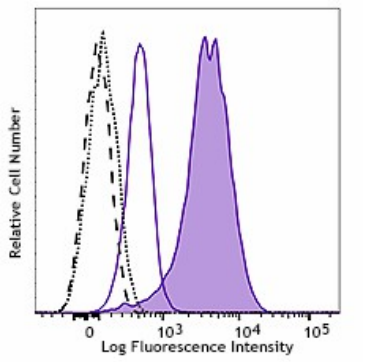
Antigen Details

Structure	Molecular weight is approximately 51 kD.
Distribution	IRF4 is reported to be expressed exclusively in the immune system.
Biology Area	Cell Biology, Transcription Factors
Molecular Family	Nuclear Markers
Antigen References	1. Lu R. 2008. *Trends Immunol* 29:487.
Gene ID	3662

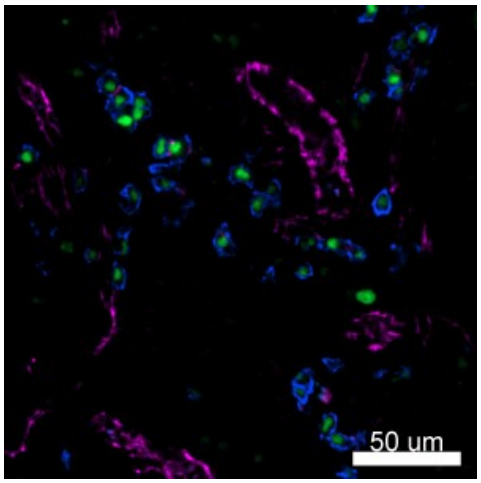
Other Formats

Alexa Fluor® 488 anti-IRF4, Purified anti-IRF4, PE anti-IRF4, Alexa Fluor® 647 anti-IRF4, Go-ChIP-Grade™ Purified anti-IRF4, PE/Cyanine7 anti-IRF4, PerCP/Cyanine5.5 anti-IRF4, Alexa Fluor® 594 anti-IRF4, Pacific Blue™ anti-IRF4

Product Data



PHA-stimulated (3 days) or freshly isolated human peripheral blood lymphocytes were stained with CD4 APC, this fixed and permeabilized with True-Nuclear™ Transcription Factor Buffer Set (Cat. No. 424401). Cells were then stained with IRF4 (clone IRF4.3E4) PE (open histogram with solid line for fresh cells, filled histogram for stimulated cells) or rat IgG1, κ PE isotype control (dash line for fresh cell, dot line for stimulated cells). Data shown was gated on CD4+ lymphocyte population.



Confocal image of human lymph node sample acquired using the IBEX method of highly multiplexed antibody-based imaging: CD31 (magenta) in Cycle 2, CD138 (blue) in Cycle 2, and IRF4 (green) in Cycle 6. Tissues were prepared using ~1% (vol/vol) formaldehyde and a detergent. Following fixation, samples are immersed in 30% (wt/vol) sucrose for cryoprotection. Images are courtesy of Drs. Andrea J. Radtke and Ronald N. Germain of the Center for Advanced Tissue Imaging (CAT-I) in the National Institute of Allergy and Infectious Diseases (NIAID, NIH).

BioLegend Inc., 8999 BioLegend Way, San Diego, CA 92121 www.biolegend.com
Toll-Free Phone: 1-877-Bio-Legend (246-5343) Phone: (858) 768-5800 Fax: (877) 455-9587