PE/Fire™ 810 anti-mouse I-A/I-E Antibody

Catalog# / Size	107667 / 25 µg
Clone	M5/114.15.2
Regulatory Status	RUO
Other Names	MHC class II
Isotype	Rat IgG2b, κ
Description	These class II molecules are expressed on antigen presenting cells (including B cells) and a subset of T cells from H-$2^{b,d,q,r}$ bearing mice and are involved in antigen presentation to T cells expressing CD3/TCR and CD4 proteins.

Product Details

Verified Reactivity	Mouse
Antibody Type	Monoclonal
Host Species	Rat
Immunogen	Activated C57BL/6 mouse spleen cells
Formulation	Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide and BSA (origin USA)
Preparation	The antibody was purified by affinity chromatography and conjugated with PE/Fire™ 810 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	FC - Quality tested
Recommended Usage	Each lot of this antibody is quality control tested by 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. * PE/Fire™ 810 has a maximum excitation of 488/561 nm and a maximum emission of 810 nm. Excessive exposure to light, and commonly used fixation, permeabilization buffers can affect PE/Fire™ 810 fluorescence signal intensity and spread. Please keep conjugates protected from light exposure. For more information and representative data, visit our Fire Dyes page.
Excitation Laser	Blue Laser (488 nm) Green Laser (532 nm)/Yellow-Green Laser (561 nm)
Application Notes	The M5/114.15.2 antibody reacts with a polymorphic determinant shared by the I-A^b, I-A^d, I-A^q, I-E^d, and I-E^k MHC class II alloantigens from mice carrying H-$2^{p,r,q,b,d,u}$ haplotypes. Clone M5/114.15.2 however does not react wtih I-A^f, I-A^k, or I-A^s MHC class II alloantigens.[1] Additional reported applications (for the relevant formats) include: immunoprecipitation[1], immunohistochemistry of frozen sections[2,3,6], *in vitro* and *in vivo* blocking of antigen presentation or ligand binding[4-7], and spatial biology (IBEX)[17,18]. The Ultra-LEAF™ purified antibody (Endotoxin < 0.01 EU/µg, Azide-Free, 0.2 µm filtered) is recommended for functional assays (Cat. Nos. 107655 & 107656).

Application References

(PubMed link indicates BioLegend citation)

1. Bhattacharya A, *et al.* 1981. *J. Immunol.* 127:2488. (IP)
2. Viville S, *et al.* 1993. *Cell* 72:635. (IHC)
3. Nelson AJ, *et al.* 1993. *J. Immunol.* 151:2453. (IHC)
4. Shi Y, *et al.* 1998. *J. Exp. Med.* 187:367. (Block)
5. Yamashita I, *et al.* 1993. *Int. Immunol.* 5:1139.

6. Guo M, *et al.* 1995. *Zygote* 3:65. (IHC)
7. Kim A, *et al.* 2004. *Exp. Mol. Med.* 36:428. (Block)
8. Luckashenak NA, *et al.* 2006. *J. Immunol.* 177:5177.
9. Venanzi ES, *et al.* 2007. *J. Immunol.* 179:5693.
10. Christensen SR, *et al.* 2006. *Immunity* 25:417. PubMed
11. Matte-Martone C, *et al.* 2008. *Blood* 111:3884. PubMed
12. De Pascalis R, *et al.* 2008. *Infect. Immun.* 76:4311. PubMed
13. Kuns RD, *et al.* 2009. *Blood* 113:5999. PubMed
14. Sabatino JJ, *et al.* 2011. *J. Exp. Med.* 208:81. PubMed
15. Draber P, *et al.* 2011. *Mol Cell Biol.* 22:4550. PubMed
16. Fu H, *et al.* 2014. *Nat Commun.* 5:3436. PubMed
17. Radtke AJ, *et al.* 2020. *Proc Natl Acad Sci U S A.* 117:33455-65. (SB) PubMed
18. Radtke AJ, *et al.* 2022. *Nat Protoc.* 17:378-401. (SB) PubMed

RRID AB_2894690 (BioLegend Cat. No. 107667)

Antigen Details

Structure	MHC class II
Distribution	B cell and activated T cells, APCs of the H-2^{b,d,q,r} bearing mice
Function	Antigen presentation
Ligand/Receptor	CD3/TCR, CD4
Cell Type	Antigen-presenting cells, B cells, Dendritic cells, T cells, Tregs
Biology Area	Immunology, Innate Immunity
Molecular Family	MHC Antigens
Antigen References	1. Watts C. 1997. *Ann. Rev. Immunol.* 15:821. 2. Pamer E, *et al.* 1998. *Ann. Rev. Immunol.* 16:323.
Gene ID	14961 14969

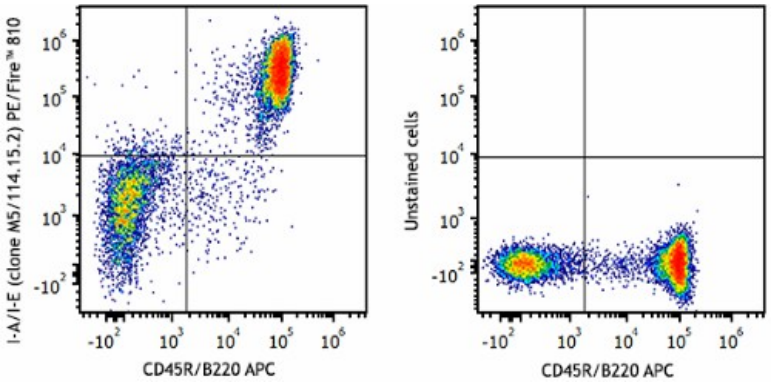
Related Protocols

Cell Surface Flow Cytometry Staining Protocol

Other Formats

Biotin anti-mouse I-A/I-E, FITC anti-mouse I-A/I-E, PE anti-mouse I-A/I-E, Purified anti-mouse I-A/I-E, PE/Cyanine5 anti-mouse I-A/I-E, APC anti-mouse I-A/I-E, Alexa Fluor® 488 anti-mouse I-A/I-E, Alexa Fluor® 647 anti-mouse I-A/I-E, Pacific Blue™ anti-mouse I-A/I-E, Alexa Fluor® 700 anti-mouse I-A/I-E, PerCP/Cyanine5.5 anti-mouse I-A/I-E, PerCP anti-mouse I-A/I-E, APC/Cyanine7 anti-mouse I-A/I-E, PE/Cyanine7 anti-mouse I-A/I-E, Brilliant Violet 421™ anti-mouse I-A/I-E, Brilliant Violet 510™ anti-mouse I-A/I-E, Purified anti-mouse I-A/I-E (Maxpar® Ready), Brilliant Violet 605™ anti-mouse I-A/I-E, Brilliant Violet 650™ anti-mouse I-A/I-E, Brilliant Violet 711™ anti-mouse I-A/I-E, Brilliant Violet 785™ anti-mouse I-A/I-E, PE/Dazzle™ 594 anti-mouse I-A/I-E, Alexa Fluor® 594 anti-mouse I-A/I-E, APC/Fire™ 750 anti-mouse I-A/I-E, TotalSeq™-A0117 anti-mouse I-A/I-E, Ultra-LEAF™ Purified anti-mouse I-A/I-E, TotalSeq™-B0117 anti-mouse I-A/I-E, TotalSeq™-C0117 anti-mouse I-A/I-E, Spark Blue™ 550 anti-mouse I-A/I-E, PE/Fire™ 640 anti-mouse I-A/I-E, Spark YG™ 581 anti-mouse I-A/I-E, PE/Fire™ 810 anti-mouse I-A/I-E, Spark UV™ 387 anti-mouse I-A/I-E

Product Data



C57BL/6 mouse splenocytes were stained with anti-mouse CD45R/B220 APC and anti-mouse I-A/I-E (clone M5/114.15.2) PE/Fire™ 810 (left) or anti-mouse CD45R/B220 APC only (right).

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