PE anti-S100A8 Antibody

Catalog# / Size	377104 / 25 tests 377105 / 100 tests
Clone	A22124B
Regulatory Status	RUO
Other Names	S100 Calcium-binding protein A8, Cystic Fibrosis Antigen (CFAG), Calgranulin A (CAGA, CGLA), Myeloid-related protein 8 (MRP8), S10A8
Isotype	Mouse IgG1, κ
Description	S100A8 is a member of the S100/calgranulin family of proteins containing 2EF-hand calcium-binding motifs. S100A8 is mainly expressed in cells of the myeloid lineage and is present in circulating neutrophils and monocytes. S100A8 expression is also transiently induced in keratinocytes after epidermal injury and in psoriasis where pro-inflammatory cytokines induce its expression. S100A8 is mostly cytoplasmic, but can be translocated to the plasma membrane or released into the extracellular environment upon cellular activation. S100A8 preferentially interacts with S100A9 to form a heterodimer S100A8/A9, also known as calprotectin. S100A8/A9 functions as a danger associated molecular pattern (DAMP) molecule and stimulates innate immune cells via binding to pattern recognition receptors such as Toll-like receptor 4 (TLR4) and receptor for advanced glycation end products (AGER). Binding to TLR4 and AGER activates the MAP-kinase and NF-kappa-B signaling pathways resulting in the amplification of the proinflammatory cascade. The extracellular functions of S100A8/A9 also include the recruitment of leukocytes, promotion of cytokine and chemokine production, and regulation of leukocyte adhesion and migration. S100A8/A9 displays apoptosis-inducing activity against various tumor cells and also has antimicrobial activity by depriving bacterial pathogens of essential trace metals such as Zn^{2+} and Mn^{2+}.

Product Details

Verified Reactivity	Human, Rat, Mouse
Antibody Type	Monoclonal
Host Species	Mouse
Immunogen	Recombinant fragment of human S100A8
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 under optimal conditions.
Concentration	Lot-specific (to obtain lot-specific concentration and expiration, please enter the lot number in our Certificate of Analysis online tool.)
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
Recommended Usage	Each lot of this antibody is quality control tested by intracellular flow cytometry using our Cyto-Fast™ Fix/Perm Buffer Set. For flow cytometric staining, the suggested use of this reagent is 5 µL per 10^6 cells in 100 µl volume. It is highly 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)
RRID	AB_3717206 (BioLegend Cat. No. 377104) AB_3717206 (BioLegend Cat. No. 377105)

Antigen Details

Structure	Homodimer
Distribution	Neutrophils, monocytes, keratinocytes
Function	Pro-inflammatory molecule
Interaction	Neutrophils, monocytes
Ligand/Receptor	Toll-like receptor 4 (TLR4) and receptor for advanced glycation end products (AGER)
Biology Area	Immunology

Antigen References

1. Bhardwaj RS, *et al*. 1992. *Eur. J. Immunol*. 22:1891.
2. Hunter MJ, *et al*. 1998. *J. Biol. Chem*. 273:12427.
3. Hofmann MA, *et al*. 1999. *Cell*. 97:889-901.
4. Cross SS, *et al*. 2005. *Histopathology*. 46:256.
5. Zenz R, *et al*. 2005. *Nature*. 437:369.
6. Hermani A, *et al*. 2006. *Exp. Cell Res*. 312:184.
7. Vogl T, *et al*. 2007. *Nature Med.* 13:1042.
8. Benedyk M, *et al*. 2007. *J. Invest. Dermatol.* 127:2001.
9. Corbin BD, *et al*. 2008. *Science*. 319:962.
10. Gebhardt C, *et al*. 2008. *J. Exp. Med*. 205:275.
11. Loser K, *et al*. 2010. *Nat Med.* 16:713-17.
12. Kang JH, *et al*. 2015. *Immunology.* 144:79-90.

Gene ID	6279

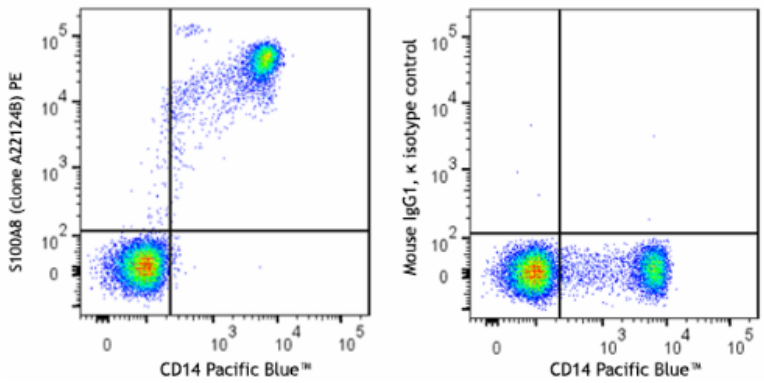
Related Protocols

- Intracellular Flow Cytometry Staining Protocol

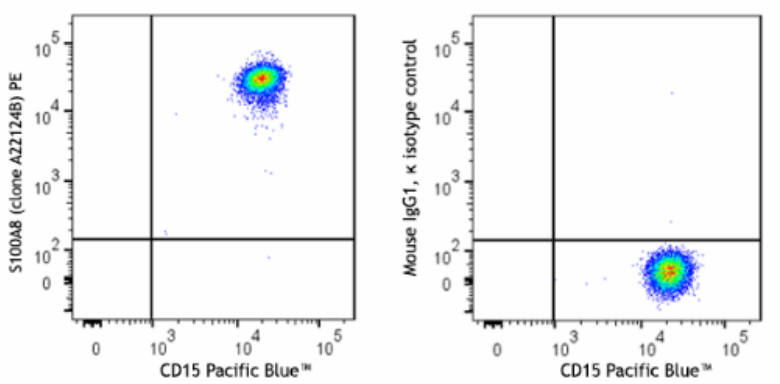
Other Formats

Purified anti-S100A8, PE anti-S100A8

Product Data



Human peripheral blood mononuclear cells were fixed and permeabilized with Cyto-Fast™ Fix/Perm Buffer (Cat. No.426803) and intracellularly stained with anti-human CD14 (clone HCD14) Pacific Blue™ and anti-human S100A8 (clone A22124B) PE (left) or mouse IgG1, κ PE Isotype control (right).



Human peripheral blood granulocytes were fixed and permeabilized with Cyto-Fast™ Fix/Perm Buffer (Cat. No.426803) and intracellularly stained with anti-human CD15 (clone W6D3) Pacific Blue™ and anti-human S100A8 (clone A22124B) PE (left) or mouse IgG1, κ PE Isotype control (right).

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