

## PE anti-S100A8 Antibody

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|--------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Catalog# / Size</b>   | 377104 / 25 tests<br>377105 / 100 tests                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Clone</b>             | A22124B                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Regulatory Status</b> | RUO                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Other Names</b>       | S100 Calcium-binding protein A8, Cystic Fibrosis Antigen (CFAG), Calgranulin A (CAGA, CGLA), Myeloid-related protein 8 (MRP8), S10A8                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>Isotype</b>           | Mouse IgG1, $\kappa$                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>Description</b>       | 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 $\text{Zn}^{2+}$ and $\text{Mn}^{2+}$ . |

## Product Details

|                               |                                                                                                                                                                                                                                                                                                                                                                    |
|-------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Verified Reactivity</b>    | Human, Rat, Mouse                                                                                                                                                                                                                                                                                                                                                  |
| <b>Antibody Type</b>          | Monoclonal                                                                                                                                                                                                                                                                                                                                                         |
| <b>Host Species</b>           | Mouse                                                                                                                                                                                                                                                                                                                                                              |
| <b>Immunogen</b>              | Recombinant fragment of human S100A8                                                                                                                                                                                                                                                                                                                               |
| <b>Formulation</b>            | Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide and BSA (origin USA)                                                                                                                                                                                                                                                                            |
| <b>Preparation</b>            | The antibody was purified by affinity chromatography and conjugated with PE under optimal conditions.                                                                                                                                                                                                                                                              |
| <b>Concentration</b>          | Lot-specific (to obtain lot-specific concentration and expiration, please enter the lot number in our <a href="#">Certificate of Analysis</a> online tool.)                                                                                                                                                                                                        |
| <b>Storage &amp; Handling</b> | The antibody solution should be stored undiluted between 2°C and 8°C, and protected from prolonged exposure to light. <b>Do not freeze.</b>                                                                                                                                                                                                                        |
| <b>Application</b>            | <a href="#">ICFC - Quality tested</a>                                                                                                                                                                                                                                                                                                                              |
| <b>Recommended Usage</b>      | 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 $\mu\text{L}$ per $10^6$ cells in 100 $\mu\text{L}$ volume. It is highly recommended that the reagent be titrated for optimal performance for each application. |
| <b>Excitation Laser</b>       | Blue Laser (488 nm)<br>Green Laser (532 nm)/Yellow-Green Laser (561 nm)                                                                                                                                                                                                                                                                                            |
| <b>RRID</b>                   | AB_3717206 (BioLegend Cat. No. 377104)<br>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](#)

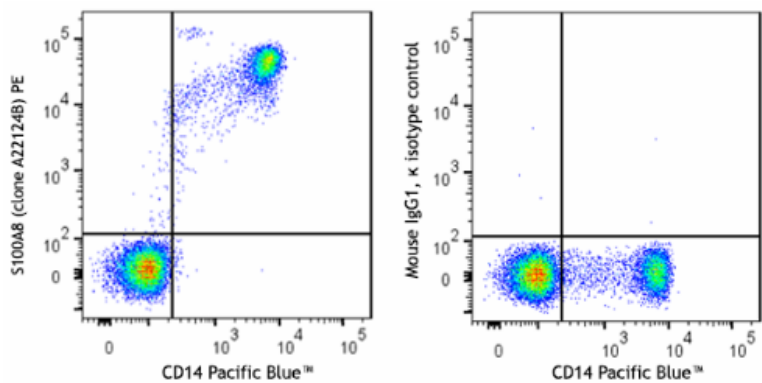
Related Protocols

- [Intracellular Flow Cytometry Staining Protocol](#)

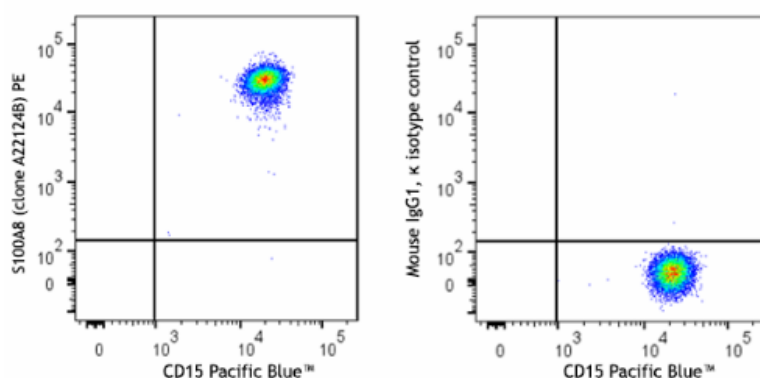
Other Formats

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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Toll-Free Phone: 1-877-Bio-Legend (246-5343) Phone: (858) 768-5800 Fax: (877) 455-9587