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S100A9 (D3U8M) Rabbit mAb (PE Conjugate)

For Research Use Only. Not for Use in Diagnostic Procedures.

Applications: FC-FP	Reactivity: M R	Sensitivity: Endogenous	Source/Isotype: Rabbit IgG	UniProt ID: #P31725	Entrez-Gene Id: 20202
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Product Usage Information

Application

Flow Cytometry (Fixed/Permeabilized)

Dilution

1:50

Storage

Supplied in PBS (pH 7.2), less than 0.1% sodium azide and 2 mg/ml BSA. Store at 4°C. Do not aliquot the antibody. Protect from light. Do not freeze.

Specificity/Sensitivity

S100A9 (D3U8M) Rabbit mAb (PE Conjugate) recognizes endogenous levels of total S100A9 protein.

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Asn98 of mouse S100A9 protein.

Description

This Cell Signaling Technology antibody is conjugated to phycoerythrin (PE) and tested in-house for direct flow cytometric analysis in mouse cells. This antibody is expected to exhibit the same species cross-reactivity as the unconjugated S100A9 (D3U8M) Rabbit mAb #73425.

Background

S100A8 and S100A9 are calcium-binding proteins that form a noncovalent heterodimer present in monocytes, neutrophils, macrophages, and some epithelial cells (1,2). S100A8 and S100A9 are secreted by a tubulin-dependent mechanism during inflammatory conditions and have antimicrobial and chemotactic functions (3-5). Extracellular S100A8/S100A9 also induces an inflammatory response in endothelial cells, including induction of proinflammatory chemokines and adhesion molecules and increased vascular permeability (6). S100A8/S100A9 induces and recruits myeloid-derived suppressor cells (MDSC) in tumor-bearing mice (7). MDSC produce additional S100A8/S100A9 themselves, resulting in a positive feedback mechanism that sustains MDSC accumulation (7). S100A8/S100A9 is also highly expressed in psoriatic skin, where it directly upregulates transcription of complement protein C3, which contributes to disease (8). In addition, tumor-infiltrating myeloid cells induce expression of S100A8 and S100A9 in cancer cells, which increases invasiveness and metastasis (9).

Background References

1. Odink, K. et al. (1987) *Nature* 330, 80-2.
2. Edgeworth, J. et al. (1991) *J Biol Chem* 266, 7706-13.
3. Rammes, A. et al. (1997) *J Biol Chem* 272, 9496-502.
4. Steinbakk, M. et al. (1990) *Lancet* 336, 763-5.
5. Ryckman, C. et al. (2003) *J Immunol* 170, 3233-42.
6. Viemann, D. et al. (2005) *Blood* 105, 2955-62.
7. Sinha, P. et al. (2008) *J Immunol* 181, 4666-75.
8. Schonthaler, H.B. et al. (2013) *Immunity* 39, 1171-81.
9. Lim, S.Y. et al. (2016) *Oncogene* 35, 5735-45.

Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

Applications Key

FC-FP: Flow Cytometry (Fixed/Permeabilized)

Cross-Reactivity Key

M: Mouse **R:** Rat

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