Revision 4

Store at -20C

#73425

S100A9 (D3U8M) Rabbit mAb

Cell Signaling TECHNOLOGY®

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

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W, IP, IHC-Bond, IHC-P, IF-F, FC-FP	M R	Endogenous	14	Rabbit IgG	#P31725	20202

Product Usage Information

Application	Dilution
Western Blotting	1:1000
Immunoprecipitation	1:50
IHC Leica Bond	1:800
Immunohistochemistry (Paraffin)	1:800
Immunofluorescence (Frozen)	1:100
Flow Cytometry (Fixed/Permeabilized)	1:100

Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at –20°C. Do not aliquot the antibody.

For a carrier free (BSA and azide free) version of this product see product #74641.

Specificity/Sensitivity

S100A9 (D3U8M) Rabbit mAb 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.

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).

Western Blot Buffer

IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 5% w/v BSA, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

Applications Key

W: Western Blotting **IP:** Immunoprecipitation **IHC-Bond:** IHC Leica Bond **IHC-P:** Immunohistochemistry (Paraffin) **IF-F:** Immunofluorescence (Frozen) **FC-FP:** Flow Cytometry (Fixed/Permeabilized)

Cross-Reactivity Key

M: Mouse **R:** Rat

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