

S100A7 (E7X2C) Rabbit mAb

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Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W, IHC-Bond, IHC-P	H	Endogenous	11	Rabbit IgG	#P31151	6278

Product Usage Information**Application**

Western Blotting
IHC Leica Bond
Immunohistochemistry (Paraffin)

Dilution

1:1000
1:100 - 1:400
1:400 - 1:1600

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 #84878.

Specificity/Sensitivity

S100A7 (E7X2C) Rabbit mAb recognizes endogenous levels of total S100A7 protein.

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Pro95 of human S100A7 protein.

Background

Despite their relatively small size (8-12 kDa) and uncomplicated architecture, S100 proteins regulate a variety of cellular processes, such as cell growth and motility, cell cycle progression, transcription, and differentiation. To date, 25 members have been identified, including S100A1-S100A18, trichohyalin, filaggrin, repetin, S100P, and S100Z, making it the largest group in the EF-hand, calcium-binding protein family. Interestingly, 14 S100 genes are clustered on human chromosome 1q21, a region of genomic instability. Research studies have demonstrated that significant correlation exists between aberrant S100 protein expression and cancer progression. S100 proteins primarily mediate immune responses in various tissue types but are also involved in neuronal development (1-4).

Each S100 monomer bears two EF-hand motifs and can bind up to two molecules of calcium (or other divalent cation in some instances). Structural evidence shows that S100 proteins form antiparallel homo- or heterodimers that coordinate binding partner proximity in a calcium-dependent (and sometimes calcium-independent) manner. Although structurally and functionally similar, individual members show restricted tissue distribution, are localized in specific cellular compartments, and display unique protein binding partners, which suggests that each plays a specific role in various signaling pathways. In addition to an intracellular role, some S100 proteins have been shown to act as receptors for extracellular ligands or are secreted and exhibit cytokine-like activities (1-4).

S100A7, a member of the S100 family, lacks a calcium binding site in the N-terminal EF-hand domain. It is also known as Psoriasin, due to its involvement of hyperproliferative disorders of the skin (5). Several members of the S100 family have been reported to play a role in tumor progression, angiogenesis, and metastasis (6). S100A7 expression has been shown to be increased in several different types of cancer including lung, breast, skin, head and neck, stomach, ovary, and others (7-10). Overexpression correlates with poor prognosis, and in some tumors promotes metastasis (11,12). The pro-tumorigenic properties of S100 proteins, including S100A7 may make them attractive candidates for therapeutic intervention (13).

Background References

1. Heizmann, C.W. et al. (2002) *Front Biosci* 7, d1356-68.
2. Donato, R. (2003) *Microsc Res Tech* 60, 540-51.
3. Marenholz, I. et al. (2004) *Biochem Biophys Res Commun* 322, 1111-22.
4. Santamaria-Kisiel, L. et al. (2006) *Biochem J* 396, 201-14.
5. Ekman, A.K. et al. (2017) *Acta Derm Venereol* 97, 441-8.
6. Chen, H. et al. (2014) *Am J Cancer Res* 4, 89-115.
7. Zhang, H. et al. (2007) *Lung Cancer* 57, 37-45.
8. Al-Haddad, S. et al. (1999) *Am J Pathol* 155, 2057-66.
9. Tripathi, S.C. et al. (2010) *PLoS One* 5, e11939.
10. Wang, C. et al. (2019) *Pathol Res Pract* 215, 127-36.
11. Mayama, A. et al. (2018) *Cancer Sci* 109, 3350-9.
12. Lin, M. et al. (2018) *DNA Cell Biol* 37, 491-500.

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 nonfat dry milk, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.
Applications Key	W: Western Blotting IHC-Bond: IHC Leica Bond IHC-P: Immunohistochemistry (Paraffin)
Cross-Reactivity Key	H: Human
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