Anti-S100A4 Antibody [SD200-08]

ET1612-13

Product Type:	Recombinant Rabbit monoclonal IgG, primary antibodies
Species reactivity:	Human, Mouse, Rat
Applications:	WB, IF-Cell, IF-Tissue, IHC-P, IP, FC
Molecular Wt:	Predicted band size: 12 kDa
Clone number:	SD200-08

Description: Fibroblast-specific protein 1 (FSP1, also called S100A4) is considered a marker of fibroblasts in different organs undergoing tissue remodeling and is used to identify fibroblasts derived from EMT in several organs including the liver. The Mts1 gene encodes a small acidic Ca2+-binding protein, Mts1 (also designated S100A4, calvasculin or metastasin). Mts1 belongs to the S100 family of small Ca2+-binding proteins and is expressed in a cell-specific manner. Mts1 protein is involved in tumor progression and metastasis, and also has a significant stimulatory effect on angiogenesis. The level of Mts1 protein in serum increases with aging, suggesting that Mts1 may play a role in the ind-uction of tumor progression via stimulation of angiogenesis. In addition, Mts1 cooperates with p53 in apoptosis induction by binding to the C-term-inal regulatory domain of p53 to inhibit the DNA binding activity of p53. The ability of Mts1 to enhance p53-dependent apoptosis may accelerate the loss of p53 function in tumors. Thus, Mts1 can contribute to the development of a more aggressive phenotype during tumor progression.

Immunogen:	Recombinant protein within Human S100A4 aa 1-101 / 101.
Positive control:	HeLa cell lysate, A549 cell lysate, RAW264.7 cell lysate, RAW264.7 treated with 100ng/mL LPS for 7 hours add 300ng/mL BFA for last 3 hours cell lysate, HeLa, human tonsil tissue, mouse lung tissue, Jurkat.
Subcellular location:	Extracellular space, nucleus.
Database links:	SwissProt: P26447 Human | P07091 Mouse | P05942 Rat
Recommended Dilutions:	
WB	1:1,000
IF-Cell	1:100-1:200
IF-Tissue	1:200-1:500
IHC-P	1:500-1:1,000
FC	1:50-1:100
IP	Use at an assay dependent concentration.
Storage Buffer:	1*TBS (pH7.4), 0.05% BSA, 40% Glycerol. Preservative: 0.05% Sodium Azide.
Storage Instruction:	Shipped at 4℃. Store at +4℃ short term (1-2 weeks). It is recommended to aliquot into single-use upon delivery. Store at -20℃ long term.
Purity:	Protein A affinity purified.

Images

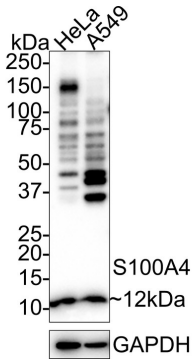

Fig1: Western blot analysis of S100A4 on different lysates with Rabbit anti-S100A4 antibody (ET1612-13) at 1/1,000 dilution.

Lane 1: HeLa cell lysate
Lane 2: A549 cell lysate

Lysates/proteins at 20 µg/Lane.

Predicted band size: 12 kDa
Observed band size: 12 kDa

Exposure time: 3 minutes;

4-20% SDS-PAGE gel.

Proteins were transferred to a PVDF membrane and blocked with 5% NFDM/TBST for 1 hour at room temperature. The primary antibody (ET1612-13) at 1/1,000 dilution was used in 5% NFDM/TBST at 4℃ overnight. Goat Anti-Rabbit IgG - HRP Secondary Antibody (HA1001) at 1/50,000 dilution was used for 1 hour at room temperature.

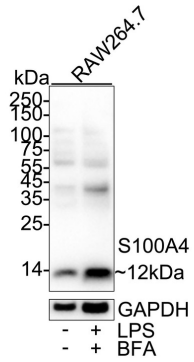

Fig2: Western blot analysis of S100A4 on different lysates with Rabbit anti-S100A4 antibody (ET1612-13) at 1/1,000 dilution.

Lane 1: RAW264.7 cell lysate
Lane 2: RAW264.7 treated with 100ng/mL LPS for 7 hours add 300ng/mL BFA for last 3 hours cell lysate

Lysates/proteins at 20 µg/Lane.

Predicted band size: 12 kDa
Observed band size: 12 kDa

Exposure time: 20 seconds; ECL: K1801;

4-20% SDS-PAGE gel.

Proteins were transferred to a PVDF membrane and blocked with 5% NFDM/TBST for 1 hour at room temperature. The primary antibody (ET1612-13) at 1/1,000 dilution was used in primary antibody dilution (K1803) at 4℃ overnight. Goat Anti-Rabbit IgG - HRP Secondary Antibody (HA1001) at 1/50,000 dilution was used for 1 hour at room temperature.

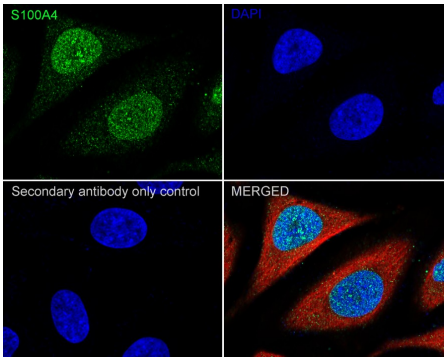

Fig3: Immunocytochemistry analysis of HeLa cells labeling S100A4 with Rabbit anti-S100A4 antibody (ET1612-13) at 1/100 dilution.

Cells were fixed in 4% paraformaldehyde for 15 minutes at room temperature, permeabilized with 0.1% Triton X-100 in PBS for 15 minutes at room temperature, then blocked with 1% BSA in 10% negative goat serum for 1 hour at room temperature. Cells were then incubated with Rabbit anti-S100A4 antibody (ET1612-13) at 1/100 dilution in 1% BSA in PBST overnight at 4 ℃. Goat Anti-Rabbit IgG H&L (iFluor™ 488, HA1121) was used as the secondary antibody at 1/1,000 dilution. PBS instead of the primary antibody was used as the secondary antibody only control. Nuclear DNA was labelled in blue with DAPI.

Beta tubulin (M1305-2, red) was stained at 1/100 dilution overnight at +4℃. Goat Anti-Mouse IgG H&L (iFluor™ 594, HA1126) was used as the secondary antibody at 1/1,000 dilution.

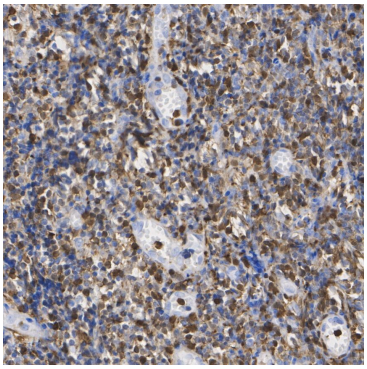

Fig4: Immunohistochemical analysis of paraffin-embedded human tonsil tissue with Rabbit anti-S100A4 antibody (ET1612-13) at 1/1,000 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (ET1612-13) at 1/1,000 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

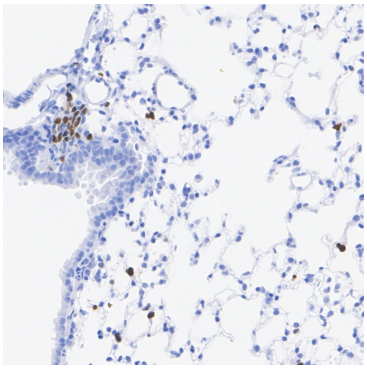

Fig5: Immunohistochemical analysis of paraffin-embedded mouse lung tissue with Rabbit anti-S100A4 antibody (ET1612-13) at 1/1,000 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (ET1612-13) at 1/1,000 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

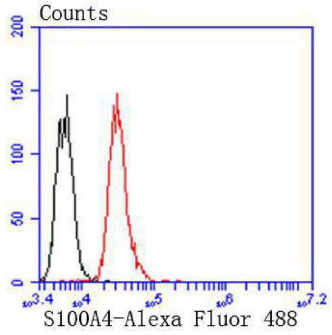

Fig6: Flow cytometric analysis of S100A4 was done on Jurkat cells. The cells were fixed, permeabilized and stained with the primary antibody (ET1612-13, 1/50) (red). After incubation of the primary antibody at room temperature for an hour, the cells were stained with a Alexa Fluor®488 conjugate-Goat anti-Rabbit IgG Secondary antibody at 1/1000 dilution for 30 minutes.Unlabelled sample was used as a control (cells without incubation with primary antibody; black).

Note: All products are "FOR RESEARCH USE ONLY AND ARE NOT INTENDED FOR DIAGNOSTIC OR THERAPEUTIC USE".

Background References

1. Taniguchi T et al. Fibrosis, vascular activation, and immune abnormalities resembling systemic sclerosis in bleomycin-treated Fli-1-haploinsufficient mice. Arthritis Rheumatol 67:517-26 (2015).
2. Crabbé A et al. Recellularization of decellularized lung scaffolds is enhanced by dynamic suspension culture. PLoS One 10:e0126846 (2015).