Anti-S100 beta Antibody [SC57-02]

ET1610-3

Product Type:	Recombinant Rabbit monoclonal IgG, primary antibodies
Species reactivity:	Human, Mouse, Rat, Zebrafish, Goat, Cynomolgus monkey, Green monkey, Pig, Rabbit
Applications:	WB, IF-Tissue, IHC-P, IHC-Fr, IF-Cell, FC, IP
Molecular Wt:	Predicted band size: 11 kDa
Clone number:	SC57-02

Description: The protein encoded by this gene is a member of the S100 family of proteins containing 2 EF-hand calcium-binding motifs. S100 proteins are localized in the cytoplasm and/or nucleus of a wide range of cells, and involved in the regulation of a number of cellular processes such as cell cycle progression and differentiation. S100 genes include at least 13 members which are located as a cluster on chromosome 1q21; however, this gene is located at 21q22.3. This protein may function in Neurite extension, proliferation of melanoma cells, stimulation of Ca2+ fluxes, inhibition of PKC-mediated phosphorylation, astrocytosis and axonal proliferation, and inhibition of microtubule assembly. Chromosomal rearrangements and altered expression of this gene have been implicated in several neurological, neoplastic, and other types of diseases, including Alzheimer's disease, Down's syndrome, epilepsy, amyotrophic lateral sclerosis, melanoma, and type I diabetes.

Immunogen: Synthetic peptide within C-terminal human S100 beta.

Positive control: Mouse brain tissue, mouse hippocampus tissue, rat brain tissue, mouse liver tissue lysates, SK-MEL-28 cell lysate, Rat brain tissue lysate, zebrafish tissue lysates, A375.

Subcellular location: Cytoplasm, Nucleus.

Database links: SwissProt: P04271 Human | P50114 Mouse | P04631 Rat

Recommended Dilutions:

WB	1:1,000-1:2,000
IF-Tissue	1:500-1:1,000
IHC-P	1:2,000
IHC-Fr	1:1,000
IF-Cell	1:200
FC	1:1,000
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

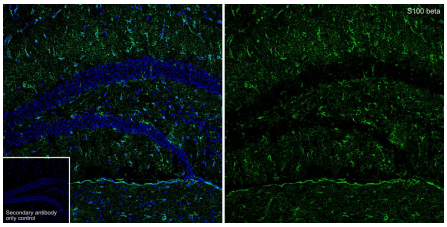

Fig1: Application: IHC-Fr

Species: Mouse

Site: Hippocampus

Sample: Frozen section

Antibody concentration: 1:1,000

Antigen retrieval: Not required

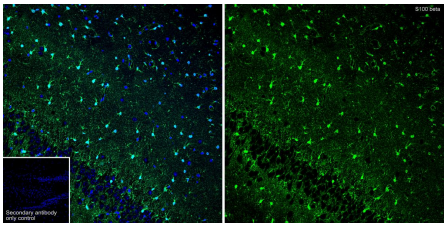

Fig2: Application: IF-tissue

Species: Mouse

Site: Hippocampus

Sample: Paraffin-embedded section

Antibody concentration: 1:500

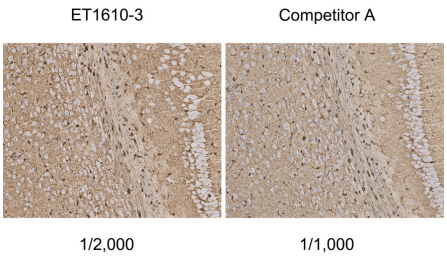

Fig3: Immunohistochemical analysis of paraffin-embedded mouse brain tissue with Rabbit anti-S100 beta antibody (ET1610-3) at 1/2,000 dilution and competitor's antibody at 1/1,000 dilution.

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 (ET1610-3) at 1/2,000 dilution and competitor's antibody 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.

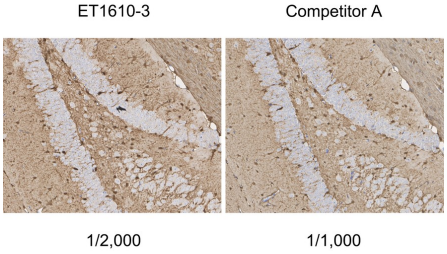

Fig4: Immunohistochemical analysis of paraffin-embedded mouse hippocampus tissue with Rabbit anti-S100 beta antibody (ET1610-3) at 1/2,000 dilution and competitor's antibody at 1/1,000 dilution.

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 (ET1610-3) at 1/2,000 dilution and competitor's antibody 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.

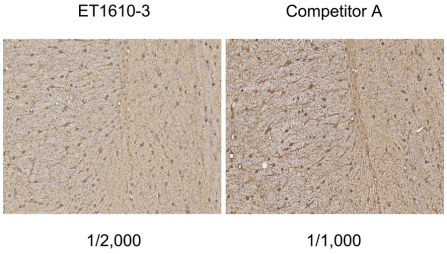

Fig5: Immunohistochemical analysis of paraffin-embedded rat brain tissue with Rabbit anti-S100 beta antibody (ET1610-3) at 1/2,000 dilution and competitor's antibody at 1/1,000 dilution.

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 (ET1610-3) at 1/2,000 dilution and competitor's antibody 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.

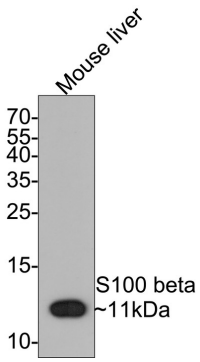

Fig6: Western blot analysis of S100 beta on mouse liver tissue lysates with Rabbit anti-S100 beta antibody (ET1610-3) at 1/1,000 dilution.

Lysates/proteins at 20 µg/Lane.

Predicted band size: 11 kDa
Observed band size: 11 kDa

Exposure time: 2 minutes;
15% 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 (ET1610-3) at 1/1,000 dilution was used in 5% NFDM/TBST at room temperature for 2 hours. Goat Anti-Rabbit IgG - HRP Secondary Antibody (HA1001) at 1:300,000 dilution was used for 1 hour at room temperature.

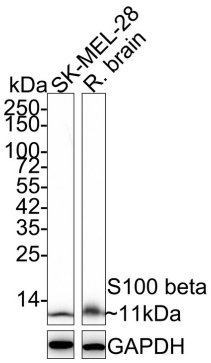

Fig7: Western blot analysis of S100 beta on different lysates with Rabbit anti-S100 beta antibody (ET1610-3) at 1/2,000 dilution.

Lane 1: SK-MEL-28 cell lysate (15 µg/Lane)
Lane 2: Rat brain tissue lysate (20 µg/Lane)

Predicted band size: 11 kDa
Observed band size: 11 kDa

Exposure time: 3 minutes 10 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 (ET1610-3) at 1/2,000 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.

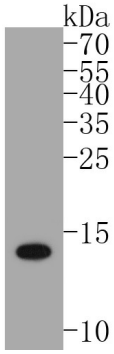

Fig8: Western blot analysis of S100 beta on zebrafish tissue lysates. Proteins were transferred to a PVDF membrane and blocked with 5% BSA in PBS for 1 hour at room temperature. The primary antibody (ET1610-3, 1/500) was used in 5% BSA at room temperature for 2 hours. Goat Anti-Rabbit IgG - HRP Secondary Antibody (HA1001) at 1:5,000 dilution was used for 1 hour at room temperature.

Predicted band size: 11 kDa
Observed band size: 14 kDa

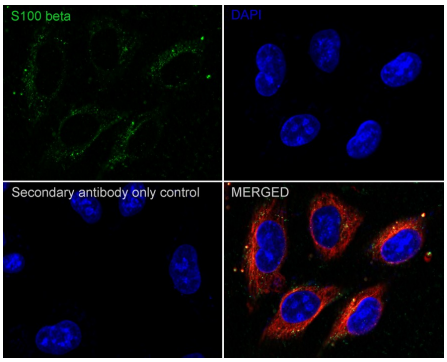

Fig9: Immunocytochemistry analysis of A375 cells labeling S100 beta with Rabbit anti-S100 beta antibody (ET1610-3) at 1/200 dilution.

Cells were fixed in ice-cold 100% methanol for 5 minutes, then blocked with 1% BSA in 10% negative goat serum for 1 hour at room temperature. Cells were then incubated with Rabbit anti-S100 beta antibody (ET1610-3) at 1/200 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.

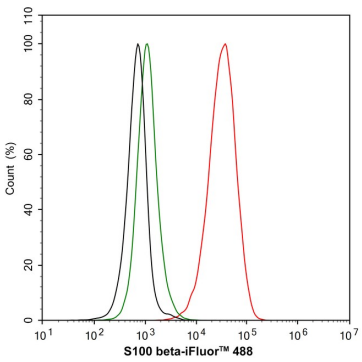

Fig10: Flow cytometric analysis of A375 cells labeling S100 beta.

Cells were fixed and permeabilized. Then stained with the primary antibody (ET1610-3, 1μg/mL) (red) compared with Rabbit IgG Isotype Control (green). After incubation of the primary antibody at +4℃ for an hour, the cells were stained with a iFluor™ 488 conjugate-Goat anti-Rabbit IgG Secondary antibody (HA1121) at 1/1,000 dilution for 30 minutes at +4℃. Unlabelled sample was used as a control (cells without incubation with primary antibody; black).

Background References

1. Miyamoto Y et al. Involvement of the Tyro3 receptor and its intracellular partner Fyn signaling in Schwann cell myelination. Mol Biol Cell 26:3489-503 (2015).
2. Gondo A et al. Sustained Down-regulation of -Dystroglycan and Associated Dysfunctions of Astrocytic Endfeet in Epileptic Cerebral Cortex. J Biol Chem 289:30279-88 (2014).