Anti-S100 beta Antibody [PD00-11]

HA601098

Product Type:	Recombinant Mouse monoclonal IgG, primary antibodies
Species reactivity:	Human
Applications:	IHC-P, WB, IF-Tissue
Molecular Wt:	Predicted band size: 11 kDa
Clone number:	PD00-11

Description: S100 calcium binding protein B (S100 beta) is a member of the multifunctional S100 family of proteins. 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. S100 beta acts as a stimulator of proliferation and migration and as an inhibitor of apoptosis and differentiation in many cell types including astrocytes, Schwann cells, chondrocytes, adipocytes, certain neuronal populations, melanocytes, Langerhans cells, histiocytes, epithelial, and myoepithelial cells. 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. S100 beta is also expressed in neoplasms derived from these cell types, making it a useful marker for the identification of melanoma and various nervous system tumors. Although ubiquitous, S100 beta has proven to be a sensitive marker for malignant melanoma, including desmoplastic and metastatic variants.

Immunogen: Full length corresponding to Human S100 beta.

Positive control: SK-MEL-28 cell lysate, Mouse brain tissue lysate, Rat brain tissue lysate, human malignant melanoma tissue, human meningioma tissue, human tonsil tissue, mouse cerebral cortex tissue, mouse hippocampus tissue, rat cerebral cortex tissue, rat hippocampus tissue, rat adipose tissue.

Subcellular location: Cytoplasm, Nucleus.

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

Recommended Dilutions:

IHC-P	1:5,000-1:20,000
WB	1:1,000-1:2,000
IF-Tissue	1:200

Storage Buffer: PBS (pH7.4), 0.1% 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

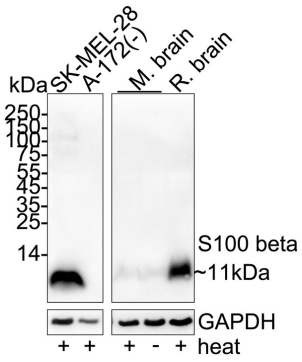

Fig1: Western blot analysis of S100 beta on different lysates with Mouse anti-S100 beta antibody (HA601098) at 1/2,000 dilution.

Lane 1: SK-MEL-28 cell lysate
Lane 2: A-172 cell lysate (negative)
Lane 3: Mouse brain tissue lysate
Lane 4: Mouse brain tissue lysate (no heat)
Lane 5: Rat brain tissue lysate

Notice: no heat means the lysate is not boiled.

Lysates/proteins at 20 µg/Lane.

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

Exposure time: 42 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 (HA601098) at 1/2,000 dilution was used in primary antibody dilution (K1803) at 4℃ overnight. Goat Anti-Mouse IgG - HRP Secondary Antibody (HA1006) at 1/50,000 dilution was used for 1 hour at room temperature.

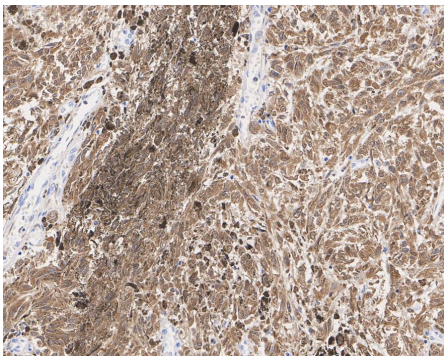

Fig2: Immunohistochemical analysis of paraffin-embedded human malignant melanoma tissue with Mouse anti-S100 beta antibody (HA601098) at 1/5,000 dilution.

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 (HA601098) at 1/5,000 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.

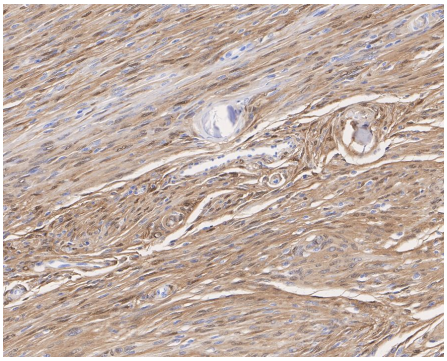

Fig3: Immunohistochemical analysis of paraffin-embedded human meningioma tissue with Mouse anti-S100 beta antibody (HA601098) at 1/5,000 dilution.

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 (HA601098) at 1/5,000 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.

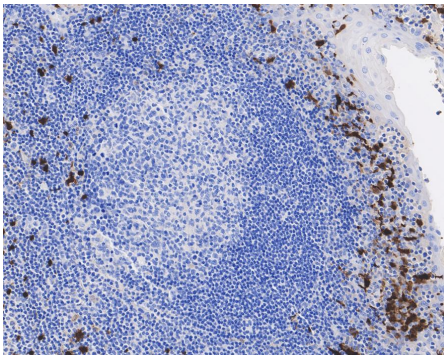

Fig4: Immunohistochemical analysis of paraffin-embedded human tonsil tissue with Mouse anti-S100 beta antibody (HA601098) at 1/5,000 dilution.

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 (HA601098) at 1/5,000 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.

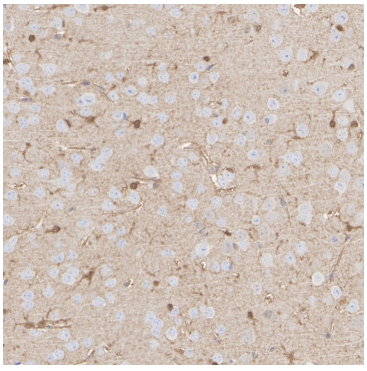

Fig5: Immunohistochemical analysis of paraffin-embedded mouse cerebral cortex tissue with Mouse anti-S100 beta antibody (HA601098) at 1/20,000 dilution.

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 (HA601098) at 1/20,000 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.

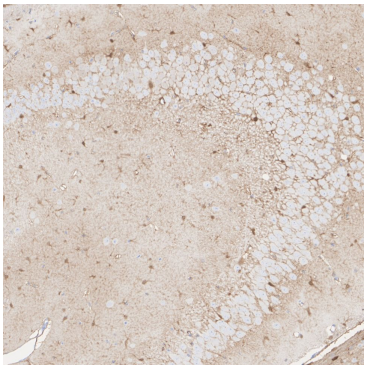

Fig6: Immunohistochemical analysis of paraffin-embedded mouse hippocampus tissue with Mouse anti-S100 beta antibody (HA601098) at 1/20,000 dilution.

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 (HA601098) at 1/20,000 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.

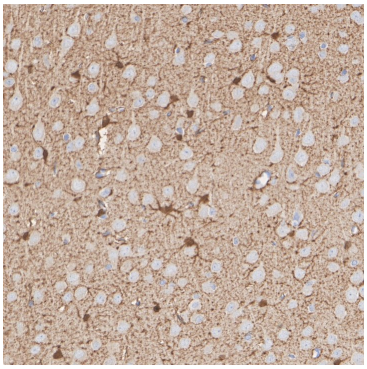

Fig7: Immunohistochemical analysis of paraffin-embedded rat cerebral cortex tissue with Mouse anti-S100 beta antibody (HA601098) at 1/20,000 dilution.

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 (HA601098) at 1/20,000 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.

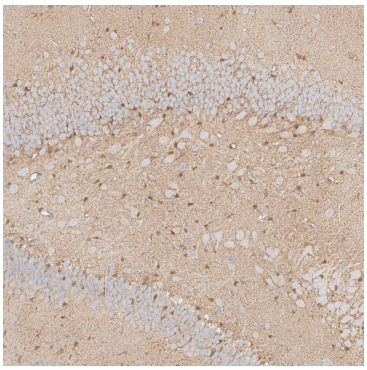

Fig8: Immunohistochemical analysis of paraffin-embedded rat hippocampus tissue with Mouse anti-S100 beta antibody (HA601098) at 1/20,000 dilution.

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 (HA601098) at 1/20,000 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.

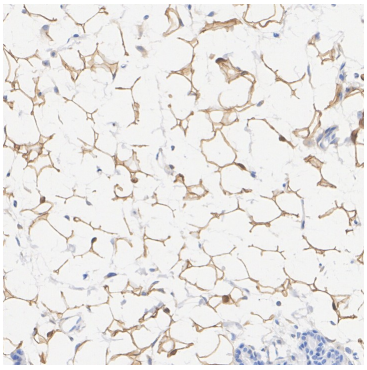

Fig9: Immunohistochemical analysis of paraffin-embedded rat adipose tissue with Mouse anti-S100 beta antibody (HA601098) at 1/20,000 dilution.

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 (HA601098) at 1/20,000 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.

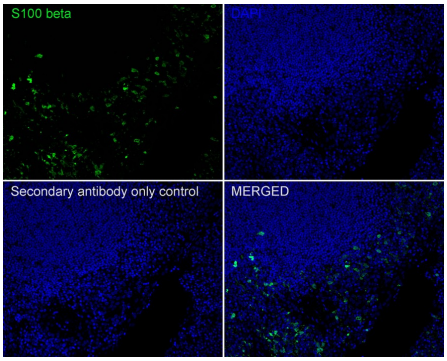

Fig10: Immunofluorescence analysis of paraffin-embedded human tonsil tissue labeling S100 beta with Mouse anti-S100 beta antibody (HA601098) at 1/200 dilution.

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 10% negative goat serum for 1 hour at room temperature, washed with PBS, and then probed with the primary antibody (HA601098, green) at 1/200 dilution overnight at 4 ℃, washed with PBS. Goat Anti-Mouse IgG H&L (iFluor™ 488, HA1125) was used as the secondary antibody at 1/1,000 dilution. Nuclei were counterstained with DAPI (blue).

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

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).