## Overview

**Product name**
Anti-S100 beta antibody [EP1576Y]

**Description**
Rabbit monoclonal [EP1576Y] to S100 beta

**Host species**
Rabbit

**Tested applications**
Suitable for: ICC/IF, WB, IP, IHC-P

**Species reactivity**
Reacts with: Mouse, Rat, Goat, Human, Zebrafish, Macaque monkey

**Immunogen**
Synthetic peptide (the amino acid sequence is considered to be commercially sensitive) corresponding to Human S100 beta aa 50 to the C-terminus (C terminal). Database link: P04271

**Positive control**
IHC-P: Human, mouse and rat cerebral cortex. Human spiral ganglion and melanoma tissue.

**General notes**
Our RabMab® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMab® patents

We are constantly working hard to ensure we provide our customers with best in class antibodies. As a result of this work we are pleased to now offer this antibody in purified format. We are in the process of updating our datasheets. The purified format is designated 'PUR' on our product labels. If you have any questions regarding this update, please contact our Scientific Support team.

This product is a recombinant rabbit monoclonal antibody.

## Properties

**Form**
Liquid

**Storage instructions**

**Dissociation constant (K_D)**
\[ K_D = 5.50 \times 10^{-10} \text{ M} \]
Learn more about K_D

Storage buffer
- pH: 7.20
- Preservative: 0.01% Sodium azide
- Constituents: 59% PBS, 40% Glycerol, 0.05% BSA

Purity
- Protein A purified

Clonality
- Monoclonal

Clone number
- EP1576Y

Isotype
- IgG

Applications

Our Abpromise guarantee covers the use of ab52642 in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

<table>
<thead>
<tr>
<th>Application</th>
<th>Abreviews</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>ICC/IF</td>
<td>🟢🟢🟢🟢🟢</td>
<td>1/100.</td>
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<tr>
<td>WB</td>
<td>🟢🟢🟢🟢🟢</td>
<td>1/1000 - 1/5000. Detects a band of approximately 11 kDa (predicted molecular weight: 11 kDa).</td>
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<tr>
<td>IP</td>
<td></td>
<td>1/50.</td>
</tr>
<tr>
<td>IHC-P</td>
<td>🟢🟢🟢🟢🟢</td>
<td>1/200 - 1/1000. Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol. See IHC antigen retrieval protocols.</td>
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Target

Function
- Weakly binds calcium but binds zinc very tightly distinct binding sites with different affinities exist for both ions on each monomer. Physiological concentrations of potassium ion antagonize the binding of both divalent cations, especially affecting high-affinity calcium-binding sites. Binds to and initiates the activation of STK38 by releasing autoinhibitory intramolecular interactions within the kinase. Interaction with AGER after myocardial infarction may play a role in myocyte apoptosis by activating ERK1/2 and p53/TP53 signaling.

Tissue specificity
- Although predominant among the water-soluble brain proteins, S100 is also found in a variety of other tissues.

Sequence similarities
- Belongs to the S-101 family.
- Contains 2 EF-hand domains.

Cellular localization
- Cytoplasm. Nucleus.

Images
Anti-S100 beta antibody [EP1576Y] (ab52642) at 1/5000 dilution (purified) + A-375 (human malignant melanoma cell line) at 10 µg

**Secondary**
Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/1000 dilution

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

Blocking and Diluting buffer and concentration: 5% NFDM/TBST

Unpurified ab52642 staining S100 beta in human spiral ganglion tissue sections by Immunohistochemistry (Formalin/PFA-fixed, paraffin-embedded sections). Tissue was fixed with paraformaldehyde and blocked with 1% BSA for 30 minutes at room temperature; antigen retrieval was by heat mediation in citrate buffer, pH 6.0. Samples were incubated with primary antibody (1/200 in PBS-T + 1% BSA) for 12 hours. An Alexa Fluor® 488-conjugated Donkey anti-rabbit IgG polyclonal (1/500) was used as the secondary antibody.
Immunofluorescent analysis of 4% paraformaldehyde-fixed, 0.1% Triton X-100 A375 (human malignant melanoma cell line) cells labeling S100 beta with purified ab52642 at 1/100 dilution, followed by Goat anti rabbit IgG (Alexa Fluor® 488) ab150077 secondary antibody at 1/500 dilution (green). The nuclear counter stain is DAPI (blue). The negative control is as follows; ab52642 at 1/100 dilution followed by ab150120 (AlexaFluor®594 Goat anti-Mouse secondary) at 1/500 dilution.

Immunohistochemical analysis of paraffin embedded human cerebral cortex tissue labeling S100 beta with purified ab52642 at 1/1000 dilution. Secondary antibody was Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/500 dilution. Counter stain: Hematoxylin.

Negative control: Using PBS instead of primary antibody.
Western blot - Anti-S100 beta antibody [EP1576Y] (ab52642)

All lanes: Anti-S100 beta antibody [EP1576Y] (ab52642) at 1/10000 dilution (purified)

Lane 1: Mouse spinal cord
Lane 2: Rat brain

Lysates/proteins at 20 µg per lane.

Secondary

All lanes: Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/1000 dilution

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

Blocking and Diluting buffer and concentration:
5% NFDM/TBST

Immunohistochemical analysis of paraffin embedded rat cerebral cortex tissue labeling S100 beta with purified ab52642 at 1/1000 dilution. Secondary antibody was Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/500 dilution. Counter stain: Hematoxylin.

Negative control: Using PBS instead of primary antibody.
Immunocytochemistry/ Immunofluorescence analysis of mouse colon-derived neurospheres labeling S100 beta with ab52642 at 1/400 dilution. The cells were fixed with paraformaldehyde and permeabilized with 0.1% Triton X-100. Next the cells were blocked with 5% serum for 1 hour at 25°C, followed by incubation with anti-S100 beta antibody [EP1576Y] (ab52642) in 1% BSA for 18 hours at 4°C. A polyclonal goat anti-rabbit IgG Alexa Fluor® 594 was used at 1/200 dilution.

Anti-S100 beta antibody [EP1576Y] (ab52642) at 1/5000 dilution (purified) + B16F0 (mouse melanoma cell line) at 10 µg

Secondary
Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/1000 dilution

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

Blocking and Diluting buffer and concentration: 5% NFDM/TBST
Immunohistochemical analysis of paraffin embedded mouse cerebral cortex tissue labeling S100 beta with purified ab52642 at 1/1000 dilution. Secondary antibody was Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/500 dilution. Counter stain: Hematoxylin.

Negative control: Using PBS instead of primary antibody.

S100 beta was immunoprecipitated from human fetal brain with purified ab52642 at 1/50 dilution. Western blot was performed from the immunoprecipitate using ab52642 and Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated was used as secondary antibody at 1/1000 dilution.

Blocking and dilution buffer and concentration: 5% NFDM/TBST.
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-S100 beta antibody
[EP1576Y] (ab52642)


Immunohistochemical analysis of embryonic mouse brain tissue, staining S100 beta with unpurified ab52642.

Equilibrium disassociation constant ($K_D$)
Learn more about $K_D$
Click here to learn more about $K_D$

Other - Anti-S100 beta antibody [EP1576Y] (ab52642)

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

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