

## Product datasheet

### Anti-SOD2/MnSOD antibody ab13534

★★★★★ [14 Abreviews](#) [90 References](#) [5 Images](#)

#### Overview

|                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Product name</b>        | Anti-SOD2/MnSOD antibody                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>Description</b>         | Rabbit polyclonal to SOD2/MnSOD                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>Host species</b>        | Rabbit                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>Tested applications</b> | <b>Suitable for:</b> ICC/IF, IHC-P, IP                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>Species reactivity</b>  | <b>Reacts with:</b> Mouse, Rat, Human                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Immunogen</b>           | Recombinant fragment corresponding to Rat SOD2/MnSOD.<br>Database link: <a href="#">P07895</a>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>General notes</b>       | <p>The Life Science industry has been in the grips of a reproducibility crisis for a number of years. Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. Please check that this product meets your needs before purchasing.</p> <p>If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, along with publications, customer reviews and Q&amp;As</p> |

#### Properties

|                             |                                                                                       |
|-----------------------------|---------------------------------------------------------------------------------------|
| <b>Form</b>                 | Liquid                                                                                |
| <b>Storage instructions</b> | Shipped at 4°C. Upon delivery aliquot and store at -20°C. Avoid freeze / thaw cycles. |
| <b>Storage buffer</b>       | Preservative: 0.1% Sodium azide<br>Constituents: PBS, 50% Glycerol                    |
| <b>Purity</b>               | Immunogen affinity purified                                                           |
| <b>Purification notes</b>   | This antibody was immunoaffinity purified.                                            |
| <b>Clonality</b>            | Polyclonal                                                                            |
| <b>Isotype</b>              | IgG                                                                                   |

#### Applications

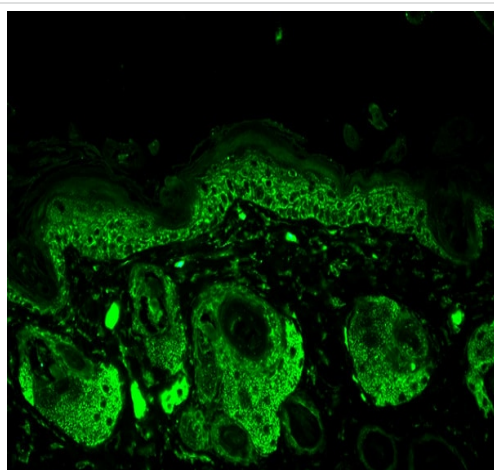
**The Abpromise guarantee** Our [Abpromise guarantee](#) covers the use of ab13534 in the following tested applications.  
The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

| Application | Abreviews | Notes                                    |
|-------------|-----------|------------------------------------------|
| ICC/IF      | ★★★★★ (1) | Use at an assay dependent concentration. |
| IHC-P       | ★★★★★ (2) | 1/100.                                   |
| IP          |           | Use a concentration of 10 µg/ml.         |

## Target

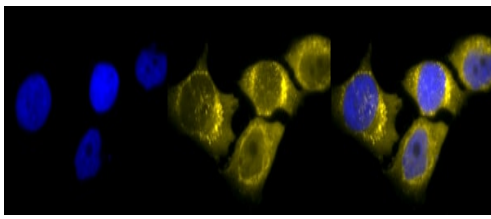
|                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|-----------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Function</b>                         | Destroys superoxide anion radicals which are normally produced within the cells and which are toxic to biological systems.                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Involvement in disease</b>           | Genetic variation in SOD2 is associated with susceptibility to microvascular complications of diabetes type 6 (MVCD6) [MIM:612634]. These are pathological conditions that develop in numerous tissues and organs as a consequence of diabetes mellitus. They include diabetic retinopathy, diabetic nephropathy leading to end-stage renal disease, and diabetic neuropathy. Diabetic retinopathy remains the major cause of new-onset blindness among diabetic adults. It is characterized by vascular permeability and increased tissue ischemia and angiogenesis. |
| <b>Sequence similarities</b>            | Belongs to the iron/manganese superoxide dismutase family.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Post-translational modifications</b> | Nitrated under oxidative stress. Nitration coupled with oxidation inhibits the catalytic activity.                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>Cellular localization</b>            | Mitochondrion matrix.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |

## Images



ab13534 at 1/100 dilution staining Superoxide Dismutase 2 in mouse back skin tissue section by Immunohistochemistry (Bouin's fixative fixed paraffin-embedded tissue section). Antigen retrieval was done by microwave in citrate buffer. A Fluorophore-conjugated goat anti-rabbit secondary was used at 1/50 dilution.

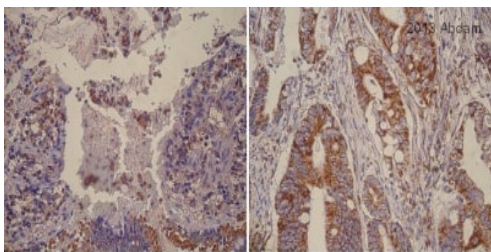
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-SOD2/MnSOD antibody (ab13534)



Immunocytochemistry/ Immunofluorescence - Anti-SOD2/MnSOD antibody (ab13534)

Immunocytochemistry/Immunofluorescence analysis of HeLa cells labelling SOD2/MnSOD with ab13534. Cells were fixed with 2% formaldehyde for 20 minutes at room temperature and incubated with the primary antibody at a dilution of 1/120 for 12 hours at 4°C. Followed by incubation with a R-PE-conjugated goat anti-rabbit IgG at a dilution of 1/200 for 2 hours at room temperature. Counterstained with DAPI (blue) at 1/40000 for 2 hours at room temperature. Magnification: 100x.

Left: DAPI (blue) nuclear stain. Middle: SOD2/MnSOD. Right: Merge.



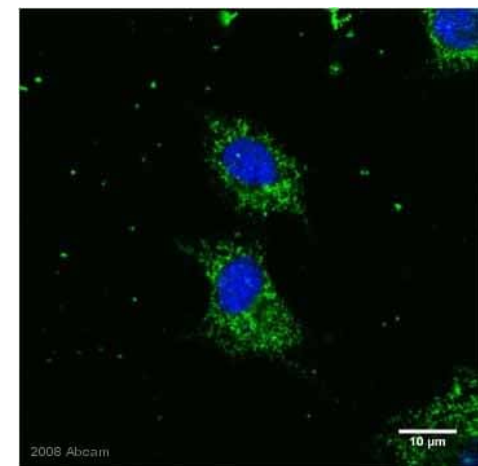
Ileo (Horse)

Colon (human)

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-SOD2/MnSOD antibody (ab13534)

This image is courtesy of an anonymous Abreview

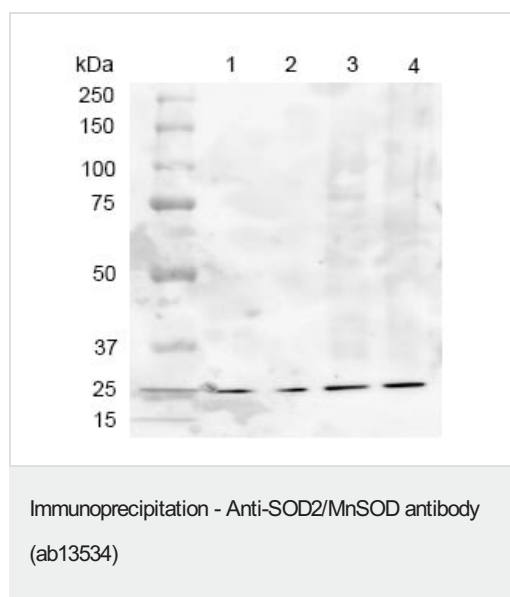
ab13534 staining SOD2 in Human colon and Horse ileo tissue sections by Immunohistochemistry (IHC-P - paraformaldehyde-fixed, paraffin-embedded sections). Tissue was fixed with formaldehyde and antigen retrieval was by heat mediation. Samples were incubated with primary antibody (1/2000) for 18 hours.



Immunocytochemistry/ Immunofluorescence - Anti-SOD2/MnSOD antibody (ab13534)

This image is courtesy of an Abreview submitted by Dr Anne Chiamello

ab13534 staining differentiating (rat) PC12 cells by ICC/IF. Cells were PFA fixed and permeabilized in 0.2% Triton X100 prior to blocking in 10% serum at RT for 1 hour. The primary antibody was incubated with the sample for 1 hour at 2 µg/ml. An Alexa Fluor® 488 conjugated goat anti-rabbit antibody diluted 1/1000 was used as the secondary. Cells were counterstained with the nuclear TOPRO-3 stain.



**Lane 1:** ab13534 + Mouse brain lysate (250µg)

**Lane 2:** ab13534 + Mouse brain lysate (250µg, ½ dilution)

**Lane 3:** Mouse brain lysate (15µg)

**Lane 4:** Rat brain lysate (15µg)

Ab13534 at 1:1000 immunoprecipitating SOD2 in mouse brain and rat brain lysate. For western blotting, donkey anti- rabbit IgG (HRP) was used as the secondary antibody.

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