# Product datasheet

## Anti-Smad1 antibody [EP565Y] ab33902

![Recombinant RabMAb](image1.png)

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This product is a recombinant monoclonal antibody, which offers several advantages including:
- High batch-to-batch consistency and reproducibility
- Improved sensitivity and specificity
- Long-term security of supply
- Animal-free production

For more information [see here](#).

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.

## Properties

<table>
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<tr>
<th>Properties</th>
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<tr>
<td><strong>Form</strong></td>
<td>Liquid</td>
</tr>
<tr>
<td><strong>Storage instructions</strong></td>
<td>Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C long term. Avoid freeze / thaw cycle.</td>
</tr>
<tr>
<td><strong>Storage buffer</strong></td>
<td>Preservative: 0.01% Sodium azide</td>
</tr>
</tbody>
</table>
Constituents: 59% PBS, 40% Glycerol, 0.05% BSA

Purity
Protein A purified

Clonality
Monoclonal

Clone number
EP565Y

Isotype
IgG

Applications

Our Abpromise guarantee covers the use of ab33902 in the following tested applications.
The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

<table>
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<tr>
<th>Application</th>
<th>Abreviews</th>
<th>Notes</th>
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<tr>
<td>Flow Cyt</td>
<td></td>
<td>1/100.</td>
</tr>
<tr>
<td>ICC/IF</td>
<td></td>
<td>1/100.</td>
</tr>
<tr>
<td>WB</td>
<td>★★★☆☆☆☆☆</td>
<td>1/1000. Detects a band of approximately 58 kDa (predicted molecular weight: 52 kDa).</td>
</tr>
</tbody>
</table>

Target

Function
Transcriptional modulator activated by BMP (bone morphogenetic proteins) type 1 receptor kinase. SMAD1 is a receptor-regulated SMAD (R-SMAD). SMAD1/OAZ1/PSMB4 complex mediates the degradation of the CREBBP/EP300 repressor SNIP1.

Tissue specificity
Ubiquitous. Highest expression seen in the heart and skeletal muscle.

Sequence similarities
Belongs to the dwarfin/SMAD family.
Contains 1 MH1 (MAD homology 1) domain.
Contains 1 MH2 (MAD homology 2) domain.

Post-translational modifications
Phosphorylated on serine by BMP type 1 receptor kinase.
Ubiquitin-mediated proteolysis by SMAD-specific E3 ubiquitin ligase SMURF1.

Cellular localization

Images
Western blot - Anti-Smad1 antibody [EP565Y] (ab33902)

All lanes: Anti-Smad1 antibody [EP565Y] (ab33902) at 1/1000 dilution (Purified)

Lane 1: HEK-293 (Human embryonic kidney epithelial cell) whole cell lysates
Lane 2: A-673 (Human muscle Ewing’s Sarcoma) whole cell lysates
Lane 3: NIH/3T3 (Mouse embryonic fibroblast) whole cell lysates
Lane 4: C2C12 (Mouse myoblasts myoblast) whole cell lysates
Lane 5: Mouse brain lysates
Lane 6: Mouse skeletal muscle lysates
Lane 7: Mouse stomach lysates

Lysates/proteins at 20 µg per lane.

Secondary
All lanes: Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/20000 dilution

Predicted band size: 52 kDa
Observed band size: 58 kDa

why is the actual band size different from the predicted?

Blocking/Diluting buffer: 5% NFDM/TBST
Immunocytochemistry/ Immunofluorescence analysis of HeLa (Human cervix adenocarcinoma epithelial cell) cells labeling Smad1 with Purified ab33902 at 1/100 dilution (10 µg/mL). Cells were fixed in 4% Paraformaldehyde and permeabilized with 0.1% tritonX-100. Cells were counterstained with ab195889 Anti-alpha Tubulin antibody [DM1A] - Microtubule Marker (Alexa Fluor® 594) 1/200 (2.5 µg/mL). Goat anti rabbit IgG (Alexa Fluor® 488, ab150077) was used as the secondary antibody at 1/1000 (2 µg/mL) dilution. DAPI (blue) was used as nuclear counterstain. PBS instead of the primary antibody was used as the secondary antibody only control.

Flow Cytometry analysis of HeLa (Human cervix adenocarcinoma epithelial cell) cells labeling Smad1 with Purified ab33902 at 1/100 dilution (10 µg/mL) (Red). Cells were fixed with 4% Paraformaldehyde and permeabilised with 90% Methanol. A Goat anti rabbit IgG (Alexa Fluor® 488, ab150077) secondary antibody was used at 1/2000. Isotype control - Rabbit monoclonal IgG (Black). Unlabeled control - Cell without incubation with primary antibody and secondary antibody (Blue).

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