Product datasheet

Anti-Sumo 1 antibody ab11672

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Overview

Product name  Anti-Sumo 1 antibody
Description  Rabbit polyclonal to Sumo 1
Host species  Rabbit
Tested applications  Suitable for: IHC-P, IP
Species reactivity  Reacts with: Human
Immunogen  Recombinant full length protein corresponding to Human Sumo 1.

General notes

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.

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&As

Properties

Form  Liquid
Storage instructions  Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C or -80°C. Avoid freeze / thaw cycle.
Storage buffer  Preservative: 0.05% Sodium azide
Purity  Whole antiserum
Clonality  Polyclonal
Isotype  IgG

Applications

The Abpromise guarantee  Our Abpromise guarantee covers the use of ab11672 in the following tested applications. The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.
**Function**

Ubiquitin-like protein that can be covalently attached to proteins as a monomer or a lysine-linked polymer. Covalent attachment via an isopeptide bond to its substrates requires prior activation by the E1 complex SAE1-SAE2 and linkage to the E2 enzyme UBE2I, and can be promoted by E3 ligases such as PIAS1-4, RANBP2 or CBX4. This post-translational modification on lysine residues of proteins plays a crucial role in a number of cellular processes such as nuclear transport, DNA replication and repair, mitosis and signal transduction. Involved for instance in targeting RANGAP1 to the nuclear pore complex protein RANBP2. Polymeric SUMO1 chains are also susceptible to polyubiquitination which functions as a signal for proteasomal degradation of modified proteins. May also regulate a network of genes involved in palate development.

**Involvement in disease**

Defects in SUMO1 are the cause of non-syndromic orofacial cleft type 10 (OFC10) [MIM:613705]; also called non-syndromic cleft lip with or without cleft palate 10. OFC10 is a birth defect consisting of cleft lips with or without cleft palate. Cleft lips are associated with cleft palate in two-thirds of cases. A cleft lip can occur on one or both sides and range in severity from a simple notch in the upper lip to a complete opening in the lip extending into the floor of the nostril and involving the upper gum. Note=A chromosomal aberation involving SUMO1 is the cause of OFC10.

**Sequence similarities**

Belongs to the ubiquitin family. SUMO subfamily.
Contains 1 ubiquitin-like domain.

**Post-translational modifications**

Cleavage of precursor form by SENP1 or SENP2 is necessary for function.
Polymeric SUMO1 chains undergo polyubiquitination by RNF4.

**Cellular localization**


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<th>Application</th>
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<td>IHC-P</td>
<td></td>
<td>1/400. Perform heat mediated antigen retrieval before commencing with IHC staining protocol.</td>
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<td>IP</td>
<td>★★★★☆☆☆ (1)</td>
<td>Use at an assay dependent concentration.</td>
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**Target**

**Application**

- **Abreviews**
  - **Notes**

**Notes**

- **IHC-P**
  - 1/400. Perform heat mediated antigen retrieval before commencing with IHC staining protocol.
- **IP**
  - Use at an assay dependent concentration.
293T cells were transfected with a vector that has Sumo1 fused to GFP and a Flag tag. Cell lysates were used in IP with ab11672 (and a GFP antibody as a control). The resulting western blot was performed with a Flag antibody. As a control, cells were transfected with a vector with Sumo2 fused to GFP and a Flag tag. ab11672 does not IP anything from this lysate.

Lane 1: Sumo1 fusion lysate - IP'd with GFP antibody
Lane 2: Sumo1 fusion lysate - no IP
Lane 3: Sumo1 fusion lysate - IP'd with ab11672
Lane 4: Sumo2 fusion lysate - IP'd with ab11672

Ab11672 staining human normal placenta. Staining is localized to the nucleus and nuclear membrane.
Left panel: with primary whole serum antibody at 1/400. Right panel: isotype control.
Sections were stained using an automated system DAKO Autostainer Plus, at room temperature. Sections were rehydrated and antigen retrieved with the Dako 3-in-1 AR buffer EDTA pH 9.0 in a DAKO PT Link. Slides were peroxidase blocked in 3% H2O2 in methanol for 10 minutes. They were then blocked with Dako Protein block for 10 minutes (containing casein 0.25% in PBS), then incubated with primary antibody for 20 minutes, and detected with Dako Envision Flex amplification kit for 30 minutes. Colorimetric detection was completed with diaminobenzidine for 5 minutes. Slides were counterstained with Haematoxylin and coverslipped under DePeX. Please note that for manual staining we recommend to optimize the primary antibody concentration and incubation time (overnight incubation), and amplification may be

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