Product datasheet

Anti-Claspin antibody ab3720

Overview

Product name: Anti-Claspin antibody
Description: Rabbit polyclonal to Claspin
Host species: Rabbit
Tested applications: Suitable for: ICC/IF, IP, WB, IHC-P
Species reactivity: Reacts with: Human
Predicted to work with: Chimpanzee, Gorilla, Orangutan
Immunogen: Synthetic peptide (Human) - which represented a portion of human Claspin encoded in part by exons 11, 12 and 13.
Positive control: HeLa cell lysate.

Properties

Form: Liquid
Storage instructions: Shipped at 4°C. Upon delivery aliquot and store at -20°C. Avoid freeze / thaw cycles.
Storage buffer: Preservative: 0.1% Sodium azide
Constituents: 0.021% PBS, 1.764% Sodium citrate, 1.815% Tris
Purity: Immunogen affinity purified
Clonality: Polyclonal
Isotype: IgG

Applications

Our Abpromise guarantee covers the use of ab3720 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>
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<tbody>
<tr>
<td>ICC/IF</td>
<td>🟢🟢🟢🟢 🟢🟢🟢🟢</td>
<td>Use at an assay dependent concentration. PubMed: 19124652</td>
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<tr>
<td>IP</td>
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<td>Use at 1-5 µg/mg of lysate.</td>
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**Function**
Required for checkpoint mediated cell cycle arrest in response to inhibition of DNA replication or to DNA damage induced by both ionizing and UV irradiation. Adapter protein which binds to BRCA1 and the checkpoint kinase CHEK1 and facilitates the ATR-dependent phosphorylation of both proteins. Can also bind specifically to branched DNA structures and may associate with S-phase chromatin following formation of the pre-replication complex (pre-RC). This may indicate a role for this protein as a sensor which monitors the integrity of DNA replication forks.

**Sequence similarities**
Belongs to the claspin family.

**Domain**
The C-terminus of the protein contains 3 potential CHEK1-binding motifs (CKB motifs). Potential phosphorylation sites within CKB motif 1 and CKB motif 2 are required for interaction with CHEK1.

**Post-translational modifications**
Phosphorylated. Undergoes ATR-dependent phosphorylation by CHEK1 during activation of DNA replication or damage checkpoints. Phosphorylation by CSNK1G1/CK1 promotes CHEK1 binding. Ubiquitinated by the anaphase promoting complex/cyclosome (APC/C) during G1 phase, leading to its degradation by the proteasome. Ubiquitination is mediated via its interaction with FZR1/CDH1. Following DNA damage, it is deubiquitinated by USP28 in G2 phase, preventing its degradation.

**Cellular localization**
Nucleus.

### Images

**Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Claspin antibody**

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of human lung carcinoma tissue labelling Claspin with ab3720 at 1/1000 (1µg/ml). Detection: DAB.

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<tr>
<td>WB</td>
<td>![5/5]</td>
<td>1/500 - 1/2500. Detects a band of approximately 175 kDa (predicted molecular weight: 150 kDa).</td>
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Immunocytochemistry/ Immunofluorescence - Anti-Claspin antibody (ab3720)

This image is courtesy of an Abreview submitted by Dr Kirk McManus

ab3720 (1/200) staining Claspin in assynchronous HeLa cells (green). Cells were fixed in paraformaldehyde, permeabilised with 0.5% TritonX100/PBS and counterstained with DAPI in order to highlight the nucleus. Please refer to abreview for further experimental details.

Immunocytochemistry/ Immunofluorescence - Anti-Claspin antibody (ab3720)

ICC/IF image of ab2861 stained HeLa cells. The cells were 4% PFA fixed (10 min) and then incubated in 1%BSA / 10% normal goat serum / 0.3M glycine in 0.1% PBS-Tween for 1h to permeabilise the cells and block non-specific protein-protein interactions. The cells were then incubated with the antibody (ab2861, 1µg/ml) overnight at +4°C. The secondary antibody (green) was Alexa Fluor® 488 goat anti-mouse IgG (H+L) used at a 1/1000 dilution for 1h. Alexa Fluor® 594 WGA was used to label plasma membranes (red) at a 1/200 dilution for 1h. DAPI was used to stain the cell nuclei (blue) at a concentration of 1.43µM.

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