abcam

Product datasheet

Anti-KAP1 antibody ab3472

2 References 画像数 6

製品の概要

製品名	Anti-KAP1 antibody
製品の詳細	Rabbit polyclonal to KAP1
由来種	Rabbit
特異性	Detects recombinant human KAP 1.
アプリケーション	**適用あり:** ICC/IF, WB, IHC-P
種交差性	**交差種:** Mouse, Rat, Human
免疫原	Recombinant fragment corresponding to Human KAP1.
ポジティブ・コントロール	WB: BJ whole cell lysate; ICC: NIH-3T3 and L6 cells. IHC-P: Human breast carcinoma, mouse and rat spleen tissue.
特記事項	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

製品の特性

製品の状態	Liquid
保存方法	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.
バッファー	Preservative: 0.05% Sodium azide Constituent: 99% PBS
精製度	IgG fraction
ポリ/モノ	ポリクローナル
アイソタイプ	IgG

アプリケーション

The Abpromise guarantee **Abpromise保証は、** 次のテスト済みアプリケーションにおけるab3472の使用に適用されます

アプリケーションノートには、推奨の開始希釈率がありますが、適切な希釈率につきましてはご検討ください。

アプリケーション	Abreviews	特記事項
ICC/IF		1/50 - 1/500.
WB		1/500. Detects a band of approximately 87 kDa (predicted molecular weight: 88.5 kDa). This antibody also detects a smaller protein that is believed to be a KAP 1 degradation product.
IHC-P		1/50 - 1/500.

ターゲット情報

機能

Nuclear corepressor for KRAB domain-containing zinc finger proteins (KRAB-ZFPs). Mediates gene silencing by recruiting CHD3, a subunit of the nucleosome remodeling and deacetylation (NuRD) complex, and SETDB1 (which specifically methylates histone H3 at 'Lys-9' (H3K9me)) to the promoter regions of KRAB target genes. Enhances transcriptional repression by coordinating the increase in H3K9me, the decrease in histone H3 'Lys-9 and 'Lys-14' acetylation (H3K9ac and H3K14ac, respectively) and the disposition of HP1 proteins to silence gene expression. Recruitment of SETDB1 induces heterochromatinization. May play a role as a coactivator for CEBPB and NR3C1 in the transcriptional activation of ORM1. Also corepressor for ERBB4. Inhibits E2F1 activity by stimulating E2F1-HDAC1 complex formation and inhibiting E2F1 acetylation. May serve as a partial backup to prevent E2F1-mediated apoptosis in the absence of RB1. Important regulator of CDKN1A/p21(CIP1). Has E3 SUMO-protein ligase activity toward itself via its PHD-type zinc finger.

組織特異性

Expressed in all tissues tested including spleen, thymus, prostate, testis, ovary, small intestine, colon and peripheral blood leukocytes.

パスウェイ

Protein modification; protein sumoylation.

配列類似性

Belongs to the TRIM/RBCC family.
Contains 2 B box-type zinc fingers.
Contains 1 bromo domain.
Contains 1 PHD-type zinc finger.
Contains 1 RING-type zinc finger.

ドメイン

The HP1 box is both necessary and sufficient for HP1 binding.
The PHD-type zinc finger enhances CEBPB transcriptional activity. The PHD-type zinc finger, the HP1 box and the bromo domain, function together to assemble the machinery required for repression of KRAB domain-containing proteins. Acts as an intramolecular SUMO E3 ligase for autosumoylation of bromodomain.
The RING-finger-B Box-coiled-coil/tripartite motif (RBCC/TRIM motif) is required for interaction with the KRAB domain of KRAB-zinc finger proteins. Binds four zinc ions per molecule. The RING finger and the N-terminal of the leucine zipper alpha helical coiled-coil region of RBCC are required for oligomerization.
Contains one Pro-Xaa-Val-Xaa-Leu (PxVxL) motif, which is required for interaction with chromoshadow domains. This motif requires additional residues -7, -6, +4 and +5 of the central Val which contact the chromoshadow domain.

翻訳後修飾

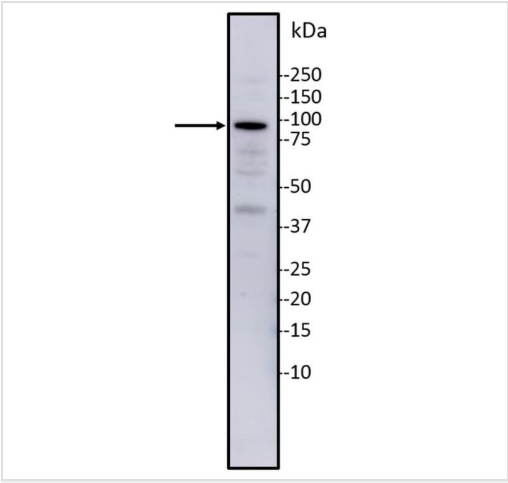
Phosphorylated upon DNA damage, probably by ATM or ATR. ATM-induced phosphorylation on

Ser-824 represses sumoylation leading to the de-repression of expression of a subset of genes involved in cell cycle control and apoptosis in response to genotoxic stress. Dephosphorylation by the phosphatases, PPP1CA and PP1CB forms, allows sumoylation and expression of TRIM28 target genes.
Sumoylation/desumoylation events regulate TRIM28-mediated transcriptional repression. Sumoylation is required for interaction with CHD3 and SETDB1 and the corepressor activity. Represses and is repressed by Ser-824 phosphorylation. Enhances the TRIM28 corepressor activity, inhibiting transcriptional activity of a number of genes including GADD45A and CDKN1A/p21. Lys-554, Lys-779 and Lys-804 are the major sites of sumoylation. In response to Dox-induced DNA damage, enhanced phosphorylation on Ser-824 prevents sumoylation and allows de-repression of CDKN1A/p21.

細胞内局在

Nucleus. Associated with centromeric heterochromatin during cell differentiation through CBX1.

画像



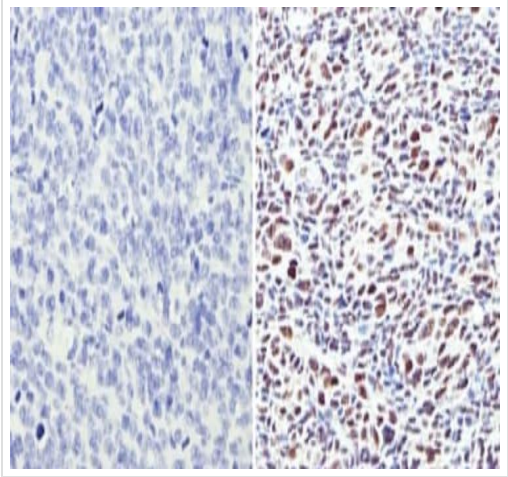
Western blot - Anti-KAP1 antibody (ab3472)

Anti-KAP1 antibody (ab3472) at 2 µg/ml + BJ (Human skin fibroblast cell line) whole cell lysate at 10 µg

Secondary

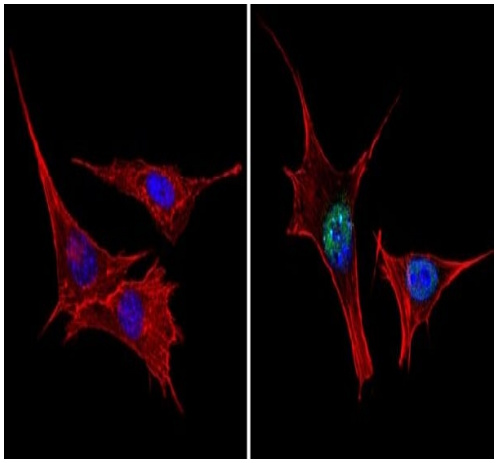
anti-rabbit HRP at 1/10000 dilution

Predicted band size: 88.5 kDa



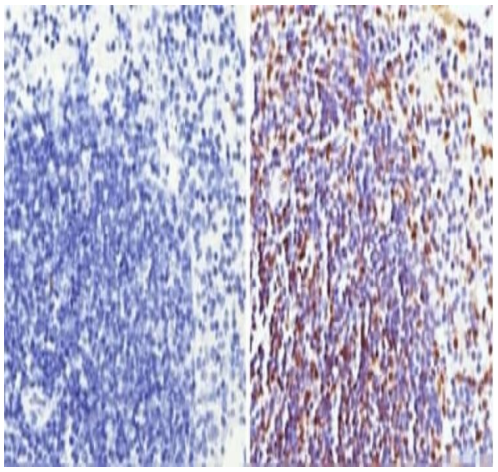
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-KAP1 antibody (ab3472)

Immunohistochemistry analysis of KAP1 showing staining in the nucleus of paraffin-embedded human breast carcinoma (right) compared to a negative control without primary antibody (left). To expose target proteins, antigen retrieval was performed using 10mM sodium citrate (pH 6.0), microwaved for 8-15 min. Following antigen retrieval, tissues were blocked in 3% H_2O_2-methanol for 15 min at room temperature, washed with ddH_2O and PBS, and then probed with ab3472 diluted in 3% BSA-PBS at a dilution of 1:200 overnight at 4°C in a humidified chamber. Tissues were washed extensively in PBST and detection was performed using an HRP-conjugated secondary antibody followed by colorimetric detection using a DAB kit. Tissues were counterstained with hematoxylin and dehydrated with ethanol and xylene to prep for mounting.



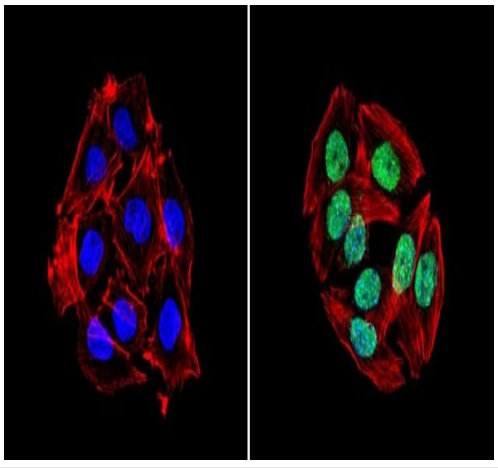
Immunocytochemistry/ Immunofluorescence - Anti-KAP1 antibody (ab3472)

Immunofluorescent analysis of KAP1 (green) showing staining in the nucleus of NIH/3T3 (Mouse embryo fibroblast cell line) cells (right) compared to a negative control without primary antibody (left). Formalin-fixed cells were permeabilized with 0.1% Triton X-100 in TBS for 5-10 minutes and blocked with 3% BSA-PBS for 30 minutes at room temperature. Cells were probed with ab3472 in 3% BSA-PBS at a dilution of 1:200 and incubated overnight at 4°C in a humidified chamber. Cells were washed with PBST and incubated with a DyLight®-conjugated secondary antibody in PBS at room temperature in the dark. Actin was stained using Alexa Fluor® 554 (red) and nuclei were stained with Hoechst or DAPI (blue). Images were taken at a magnification of 60x.



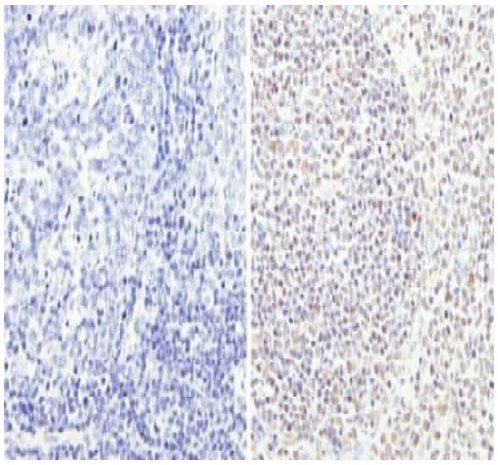
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-KAP1 antibody (ab3472)

Immunohistochemistry analysis of KAP1 showing staining in the nucleus of paraffin-embedded mouse spleen tissue (right) compared to a negative control without primary antibody (left). To expose target proteins, antigen retrieval was performed using 10mM sodium citrate (pH 6.0), microwaved for 8-15 min. Following antigen retrieval, tissues were blocked in 3% H2O2-methanol for 15 min at room temperature, washed with ddH2O and PBS, and then probed with ab3472 diluted in 3% BSA-PBS at a dilution of 1:200 overnight at 4°C in a humidified chamber. Tissues were washed extensively in PBST and detection was performed using an HRP-conjugated secondary antibody followed by colorimetric detection using a DAB kit. Tissues were counterstained with hematoxylin and dehydrated with ethanol and xylene to prep for mounting.



Immunocytochemistry/ Immunofluorescence - Anti-KAP1 antibody (ab3472)

Immunofluorescent analysis of KAP1 (green) showing staining in the nucleus of L6 (Rat skeletal muscle cell line) cells (right) compared to a negative control without primary antibody (left). Formalin-fixed cells were permeabilized with 0.1% Triton X-100 in TBS for 5-10 minutes and blocked with 3% BSA-PBS for 30 minutes at room temperature. Cells were probed with ab3472 in 3% BSA-PBS at a dilution of 1:200 and incubated overnight at 4°C in a humidified chamber. Cells were washed with PBST and incubated with a DyLight®-conjugated secondary antibody in PBS at room temperature in the dark. Actin was stained using Alexa Fluor® 554 (red) and nuclei were stained with Hoechst or DAPI (blue). Images were taken at a magnification of 60x.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-KAP1 antibody (ab3472)

Immunohistochemistry analysis of KAP1 showing staining in the nucleus of paraffin-embedded rat spleen tissue (right) compared to a negative control without primary antibody (left). To expose target proteins, antigen retrieval was performed using 10mM sodium citrate (pH 6.0), microwaved for 8-15 min. Following antigen retrieval, tissues were blocked in 3% H_2O_2-methanol for 15 min at room temperature, washed with ddH_2O and PBS, and then probed with ab3472 diluted in 3% BSA-PBS at a dilution of 1:100 overnight at 4°C in a humidified chamber. Tissues were washed extensively in PBST and detection was performed using an HRP-conjugated secondary antibody followed by colorimetric detection using a DAB kit. Tissues were counterstained with hematoxylin and dehydrated with ethanol and xylene to prep for mounting.

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