# abcam

## Product datasheet

# Anti-Ku70 antibody ab83501

★★★★★ 4 Abreviews 14 References 画像数 4

#### 製品の概要

製品名 Anti-Ku70 antibody

製品の詳細 Rabbit polyclonal to Ku70

由来種 Rabbit

アプリケーション 適用あり: IP, WB, IHC-P, ICC/IF

種交差性 交差種: Human

免疫原 Synthetic peptide corresponding to Human Ku70 aa 550 to the C-terminus conjugated to keyhole

limpet haemocyanin.

(Peptide available as ab92421)

ポジティブ・コントロール This antibody gave a positive signal in the following whole cell lysates: HeLa; Irradiated HeLa;

HepG2; Jurkat; MCF7; U2OS. ICC/IF: HeLa cells

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** pH: 7.40

Preservative: 0.02% Sodium azide

Constituent: PBS

Batches of this product that have a concentration < 1mg/ml may have BSA added as a stabilising

agent. If you would like information about the formulation of a specific lot, please contact our

scientific support team who will be happy to help.

精製度 Immunogen affinity purified

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アイソタイプ

lgG

#### アプリケーション

**The Abpromise guarantee** <u>Abpromise保証は、</u>次のテスト済みアプリケーションにおけるab83501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
IP		Use a concentration of 5 µg/ml.
WB	**** <u>(2)</u>	Use a concentration of 1 µg/ml. Detects a band of approximately 73 kDa (predicted molecular weight: 70 kDa).
IHC-P		Use a concentration of 1 µg/ml. Perform heat mediated antigen retrieval before commencing with IHC staining protocol.
ICC/IF	<b>★★★★★</b> <u>(2)</u>	Use a concentration of 5 µg/ml.

#### ターゲット情報

機能

Single stranded DNA-dependent ATP-dependent helicase. Has a role in chromosome translocation. The DNA helicase II complex binds preferentially to fork-like ends of double-stranded DNA in a cell cycle-dependent manner. It works in the 3'-5' direction. Binding to DNA may be mediated by XRCC6. Involved in DNA non-homologous end joining (NHEJ) required for double-strand break repair and V(D)J recombination. The XRCC5/6 dimer acts as regulatory subunit of the DNA-dependent protein kinase complex DNA-PK by increasing the affinity of the catalytic subunit PRKDC to DNA by 100-fold. The XRCC5/6 dimer is probably involved in stabilizing broken DNA ends and bringing them together. The assembly of the DNA-PK complex to DNA ends is required for the NHEJ ligation step. Required for osteocalcin gene expression. Probably also acts as a 5'-deoxyribose-5-phosphate lyase (5'-dRP lyase), by catalyzing the beta-elimination of the 5' deoxyribose-5-phosphate at an abasic site near double-strand breaks. 5'-dRP lyase activity allows to 'clean' the termini of abasic sites, a class of nucleotide damage commonly associated with strand breaks, before such broken ends can be joined. The XRCC5/6 dimer together with APEX1 acts as a negative regulator of transcription.

配列類似性

Belongs to the ku70 family.
Contains 1 Ku domain.
Contains 1 SAP domain.

発生段階

 $\label{promyelocyte} \mbox{Expression does not increase during promyelocyte differentiation.}$ 

翻訳後修飾

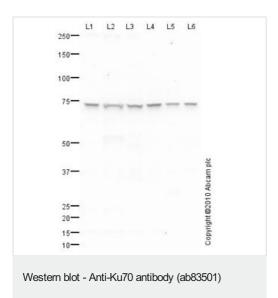
Phosphorylation by PRKDC may enhance helicase activity. Phosphorylation of Ser-51 does not

affect DNA repair.

細胞内局在

Nucleus. Chromosome.

#### 画像



All lanes: Anti-Ku70 antibody (ab83501) at 1 µg/ml

Lane 1 : HeLa (Human epithelial carcinoma cell line) Whole Cell Lysate

Lane 2: Irradiated Hela Whole Cell Lysate

**Lane 3**: HepG2 (Human hepatocellular liver carcinoma cell line) Whole Cell Lysate

Lane 4 : Jurkat (Human T cell lymphoblast-like cell line) Whole Cell Lysate

Lane 5 : MCF7 (Human breast adenocarcinoma cell line) Whole Cell Lysate

Lane 6: U2OS (Human osteosarcoma cell line) Whole Cell Lysate

Lysates/proteins at 10 µg per lane.

#### **Secondary**

**All lanes :** Goat polyclonal to Rabbit lgG - H&L - Pre-Adsorbed (HRP) at 1/3000 dilution

Developed using the ECL technique.

Performed under reducing conditions.

**Predicted band size:** 70 kDa **Observed band size:** 73 kDa

Exposure time: 1 minute

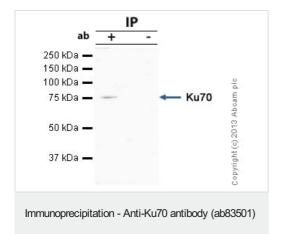
Ku70 was immunoprecipitated using 0.5mg Hela whole cell extract, 5μg of Rabbit polyclonal to Ku70 and 50μl of protein G magnetic beads (+). No antibody was added to the control (-).

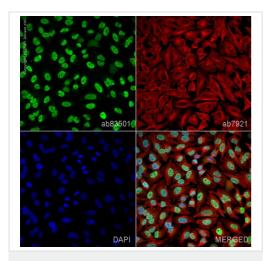
The antibody was incubated under agitation with Protein G beads for 10min, Hela whole cell extract lysate diluted in RIPA buffer was added to each sample and incubated for a further 10min under agitation.

Proteins were eluted by addition of 40µl SDS loading buffer and incubated for 10min at 70°C; 10µl of each sample was separated on a SDS PAGE gel, transferred to a nitrocellulose membrane, blocked with 5% BSA and probed with ab83501.

Secondary: Mouse monoclonal [SB62a] Secondary Antibody to Rabbit IgG light chain (HRP) (ab99697).

Band: 70kDa; Ku70

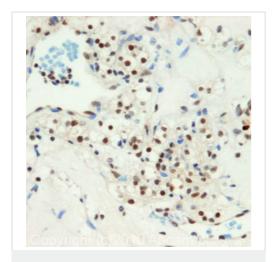




Immunocytochemistry/ Immunofluorescence - Anti-Ku70 antibody (ab83501)

ab83501 staining Ku70 in HeLa cells. The cells were fixed with 4% paraformaldehyde (10 min), permeabilized with 0.1% PBS-Triton X-100 for 5 minutes and then blocked with 1% BSA/10% normal goat serum/0.3M glycine in 0.1% PBS-Tween for 1h. The cells were then incubated overnight at 4°C with ab83501 at 5µg/ml and ab7291, Mouse monoclonal [DM1A] to alpha Tubulin - Loading Control. Cells were then incubated with ab150081, Goat polyclonal Secondary Antibody to Rabbit lgG - H&L (Alexa Fluor® 488), pre-adsorbed at 1/1000 dilution (shown in green) and ab150120, Goat polyclonal Secondary Antibody to Mouse lgG - H&L (Alexa Fluor® 594), pre-adsorbed at 1/1000 dilution (shown in pseudocolour red). Nuclear DNA was labelled with DAPI (shown in blue).

Image was acquired with a high-content analyser (Operetta CLS, Perkin Elmer) and a maximum intensity projection of confocal sections is shown.



Immunohistochemistry (Formalin/PFA-fixed paraffinembedded sections) - Anti-Ku70 antibody (ab83501)

IHC image of Ku70 staining in human kidney carcinoma formalin fixed paraffin embedded tissue section, performed on a Leica Bond<sup>TM</sup> system using the standard protocol F. The section was pretreated using heat mediated antigen retrieval with sodium citrate buffer (pH6, epitope retrieval solution 1) for 20 mins. The section was then incubated with ab83501, 1µg/ml, for 15 mins at room temperature and detected using an HRP conjugated compact polymer system. DAB was used as the chromogen. The section was then counterstained with haematoxylin and mounted with DPX.

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