

Human DNA PKcs (phospho S2056) peptide ab20406

画像数 1

製品の詳細

製品名	Human DNA PKcs (phospho S2056) peptide
アクセッション番号	<u>P78527</u>
Animal free	No
由来	Synthetic
生物種	Human
修飾	phospho S2056
配列の追加情報	This peptide can be used in studies using <u>ab18192</u> and <u>ab20407</u>

特性

Our **Abpromise guarantee** covers the use of **ab20406** in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

アプリケーション	Blocking
製品の状態	Liquid
備考	<ul style="list-style-type: none">- First try to dissolve a small amount of peptide in either water or buffer. The more charged residues on a peptide, the more soluble it is in aqueous solutions.- If the peptide doesn't dissolve try an organic solvent e.g. DMSO, then dilute using water or buffer.- Consider that any solvent used must be compatible with your assay. If a peptide does not dissolve and you need to recover it, lyophilise to remove the solvent.- Gentle warming and sonication can effectively aid peptide solubilisation. If the solution is cloudy or has gelled the peptide may be in suspension rather than solubilised.- Peptides containing cysteine are easily oxidised, so should be prepared in solution just prior to use.

前処理および保存

保存方法および安定性	Shipped at 4°C. Upon delivery aliquot and store at -20°C or -80°C. Avoid repeated freeze / thaw cycles. Information available upon request.
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関連情報

機能

Serine/threonine-protein kinase that acts as a molecular sensor for DNA damage. Involved in DNA nonhomologous end joining (NHEJ) required for double-strand break (DSB) repair and V(D)J recombination. Must be bound to DNA to express its catalytic properties. Promotes processing of hairpin DNA structures in V(D)J recombination by activation of the hairpin endonuclease artemis (DCLRE1C). The assembly of the DNA-PK complex at DNA ends is also required for the NHEJ ligation step. Required to protect and align broken ends of DNA. May also act as a scaffold protein to aid the localization of DNA repair proteins to the site of damage. Found at the ends of chromosomes, suggesting a further role in the maintenance of telomeric stability and the prevention of chromosomal end fusion. Also involved in modulation of transcription. Recognizes the substrate consensus sequence [ST]-Q. Phosphorylates 'Ser-139' of histone variant H2AX/H2AFX, thereby regulating DNA damage response mechanism. Phosphorylates DCLRE1C, c-Abl/ABL1, histone H1, HSPCA, c-jun/JUN, p53/TP53, PARP1, POU2F1, DHX9, SRF, XRCC1, XRCC1, XRCC4, XRCC5, XRCC6, WRN, MYC and RFA2. Can phosphorylate C1D not only in the presence of linear DNA but also in the presence of supercoiled DNA. Ability to phosphorylate p53/TP53 in the presence of supercoiled DNA is dependent on C1D.

配列類似性

Belongs to the PI3/PI4-kinase family.
Contains 1 FAT domain.
Contains 1 FATC domain.
Contains 2 HEAT repeats.
Contains 1 PI3K/PI4K domain.
Contains 3 TPR repeats.

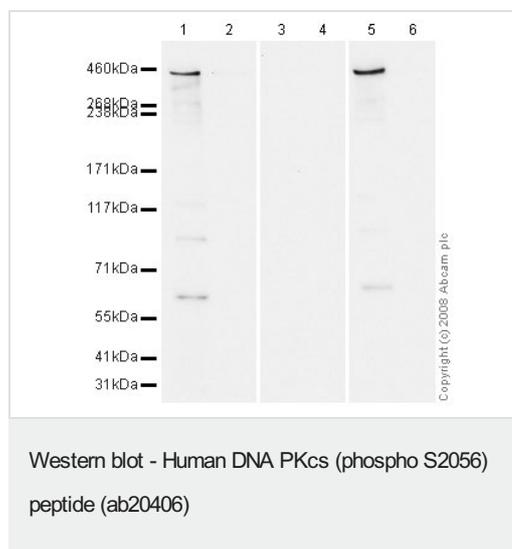
翻訳後修飾

Phosphorylated upon DNA damage, probably by ATM or ATR. Autophosphorylated on Thr-2609, Thr-2638 and Thr-2647. Thr-2609 is a DNA damage-inducible phosphorylation site (inducible with ionizing radiation, IR). Autophosphorylation induces a conformational change that leads to remodeling of the DNA-PK complex, requisite for efficient end processing and DNA repair. S-nitrosylated by GAPDH.

細胞内局在

Nucleus.

画像



All lanes : Anti-DNA PKcs (phospho S2056) antibody (**ab18192**) at 1 µg/ml

Lane 1 : HeLa Gamma Irradiated Whole Cell Lysate Pack (**ab13823**) at 20 µg

Lane 2 : 20ug untreated HeLa cell extract

Lane 3 : HeLa Gamma Irradiated Whole Cell Lysate Pack (**ab13823**) at 20 µg with Human DNA PKcs (phospho S2056) peptide (ab20406) at 1 µg/ml

Lane 4 : 20ug untreated HeLa cell extract with Human DNA PKcs (phospho S2056) peptide (ab20406) at 1 µg/ml

Lane 5 : HeLa Gamma Irradiated Whole Cell Lysate Pack (**ab13823**) at 20 µg with Human DNA PKcs peptide (**ab20407**) at 1 µg/ml

Lane 6 : 20ug untreated HeLa cell extract with Human DNA PKcs peptide ([ab20407](#)) at 1 µg/ml

Secondary

All lanes : Alexa Fluor Goat polyclonal to Rabbit IgG (700)

at 1/10000 dilution

Performed under reducing conditions.

Observed band size: 460 kDa

Additional bands at: 270 kDa (possible cleavage fragment), 270 kDa (possible cross reactivity)

[ab18192](#) specifically recognizes a band at ~460 kDa corresponding to DNA PKc in HeLa cells that have been treated with ionizing radiation (lane 1). This band is not detected in untreated cells (lane 2). The activity of the antibody is quenched by the addition of the immunizing (modified) peptide, ab20406 (lanes 3) but not the unmodified peptide, [ab20407](#) (lane 5). For the [ab13823](#) irradiated HeLa cell lysate, the 4 hour post-treatment extract was used. For the [ab13823](#) irradiated HeLa cell lysate, the 4 hour post-treatment extract was used.

Please note: All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

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