

Product datasheet

AKT1 + AKT2 + AKT3 (pS473) ELISA Kit ab126432

1 References 4 Images

Overview

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| Product name | AKT1 + AKT2 + AKT3 (pS473) ELISA Kit |
| Detection method | Colorimetric |
| Sample type | Cell Lysate |
| Assay type | Semi-quantitative |
| Assay time | 5h 00m |
| Assay duration | Multiple steps standard assay |
| Species reactivity | Reacts with: Mouse, Rat, Human |
| Product overview | <p>ab126432 is a very rapid, convenient and sensitive assay kit that can monitor the activation or function of important biological pathways in human, mouse and rat cell lysates. By determining phosphorylated Akt protein in your experimental model system, you can verify pathway activation in your cell lysates. You can simultaneously measure numerous different cell lysates without spending excess time and effort in performing a Western Blotting analysis. (UniprotID: P31749)</p> <p>This Sandwich ELISA kit is an in vitro enzyme-linked immunosorbent assay for the measurement of human, mouse and rat phospho-Akt (Ser473). An anti-pan Akt antibody has been coated onto a 96-well plate. Samples are pipetted into the wells and Akt present in a sample is bound to the wells by the immobilized antibody. The wells are washed and anti-Akt (Ser473) antibody is used to detect phosphorylated Akt (Ser473). After washing away unbound antibody, HRP-conjugated anti-rabbit IgG is pipetted to the wells. The wells are again washed, a TMB substrate solution is added to the wells and color develops in proportion to the amount of Akt (Ser473) bound. The Stop Solution changes the color from blue to yellow, and the intensity of the color is measured at 450 nm.</p> <p>Get higher sensitivity in only 90 minutes with AKT 1/2/3 (pS473) ELISA Kit (ab176635) from our SimpleStep ELISA® range.</p> |
| Tested applications | Suitable for: Sandwich ELISA |
| Platform | Microplate |

Properties

Storage instructions Store at -20°C. Please refer to protocols.

| Components | 1 x 96 tests |
|--|--------------|
| 20X Wash Buffer Concentrate | 1 x 25ml |
| 2X Cell Lysis Buffer | 1 x 5ml |
| 5X Assay Diluent | 1 x 15ml |
| Akt Microplate (12 strips x 8 wells) coated with anti-pan Akt antibody | 1 unit |
| Detection Antibody Akt (Ser473): rabbit anti-phospho-Akt (Ser473) | 2 vials |
| 500X HRP-conjugated anti-rabbit IgG | 1 x 25µl |
| Positive Control: lyophilized NIH3T3 cell lysate | 1 vial |
| Stop Solution | 1 x 8ml |
| TMB One-Step Substrate Reagent | 1 x 12ml |

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| Function | IGF-1 leads to the activation of AKT3, which may play a role in regulating cell survival. Capable of phosphorylating several known proteins. Truncated isoform 2/PKB gamma 1 without the second serine phosphorylation site could still be stimulated but to a lesser extent. |
| Tissue specificity | In adult tissues, it is highly expressed in brain, lung and kidney, but weakly in heart, testis and liver. In fetal tissues, it is highly expressed in heart, liver and brain and not at all in kidney. |
| Sequence similarities | Belongs to the protein kinase superfamily. AGC Ser/Thr protein kinase family. RAC subfamily. Contains 1 AGC-kinase C-terminal domain. Contains 1 PH domain. Contains 1 protein kinase domain. |
| Domain | Binding of the PH domain to the phosphatidylinositol 3-kinase alpha (PI(3)K) results in its targeting to the plasma membrane. |
| Post-translational modifications | Phosphorylation on Thr-305 and Ser-472 is required for full activity (By similarity). Phosphorylated upon DNA damage, probably by ATM or ATR. Ubiquitinated. When fully phosphorylated and translocated into the nucleus, undergoes 'Lys-48'-polyubiquitination catalyzed by TTC3, leading to its degradation by the proteasome. |
| Cellular localization | Cytoplasm. Membrane. Membrane-associated after cell stimulation leading to its translocation. |

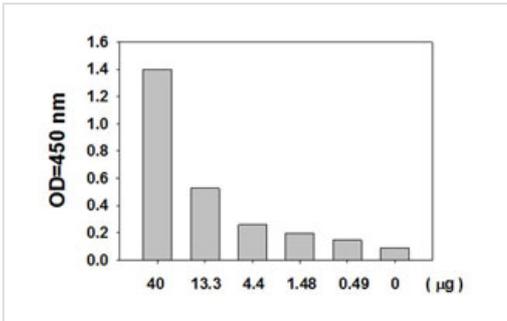
Applications

Our [Abpromise guarantee](#) covers the use of **ab126432** in the following tested applications.

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

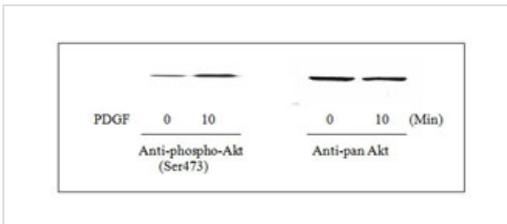
| Application | Abreviews | Notes |
|----------------|-----------|--|
| Sandwich ELISA | | Use at an assay dependent concentration. |

Images



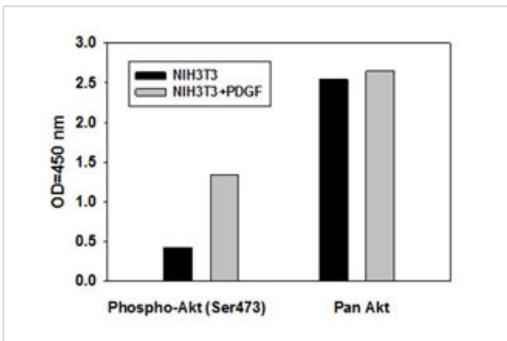
Sandwich ELISA - Akt (pSer473) ELISA Kit (ab126432)

The NIH3T3 cells were treated with recombinant human PDGF for 10 minutes to induce phosphorylation of Akt. Serial dilutions of lysates were analyzed in this ELISA.



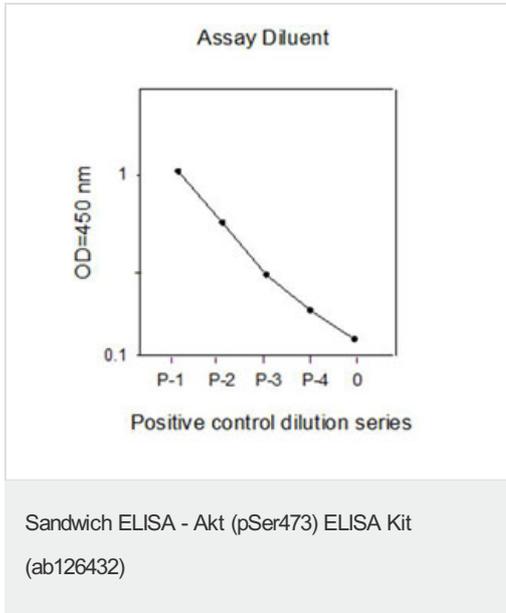
Western blot - Akt (pSer473) ELISA Kit (ab126432)

NIH3T3 cells were treated or untreated with recombinant human PDGF for 10 min. Cell lysates were analyzed by Western Blot.



Sandwich ELISA - Akt (pSer473) ELISA Kit (ab126432)

NIH3T3 cells were treated or untreated with recombinant human PDGF for 10 min. Cell lysates were analyzed using this phosphoELISA.



A431 cells were treated with recombinant human EGF at 37°C for 20 min. Solubilize cells at 4×10^7 cells/ml in Cell Lysate Buffer. Serial dilutions of lysates were analyzed in this ELISA.

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