

## DESCRIPTION

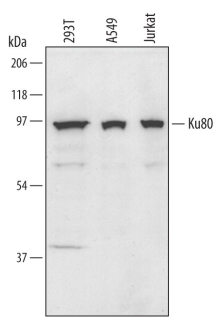
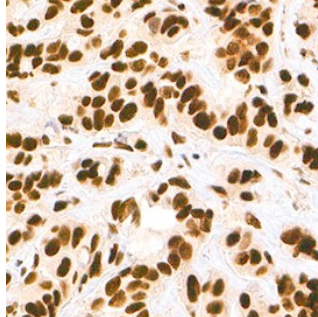
|                           |   |
|---------------------------|---|
| <b>Species Reactivity</b> | Human   |
| <b>Specificity</b>        | Detects human Ku80 in Western blots.  |
| <b>Source</b>             | Polyclonal Goat IgG   |
| <b>Purification</b>       | Antigen Affinity-purified   |
| <b>Immunogen</b>          | <i>E. coli</i> -derived recombinant human Ku80<br>Asn402-Lys565<br>Accession # P13010   |
| <b>Formulation</b>        | Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details.<br>*Small pack size (-SP) is supplied either lyophilized or as a 0.2 µm filtered solution in PBS. |

## APPLICATIONS

**Please Note:** Optimal dilutions should be determined by each laboratory for each application. *General Protocols* are available in the *Technical Information* section on our website.

|                             | <b>Recommended Concentration</b> | <b>Sample</b> |
|-----------------------------|----------------------------------|---------------|
| <b>Western Blot</b>         | 1 µg/mL                          | See Below     |
| <b>Immunohistochemistry</b> | 1-15 µg/mL                       | See Below     |

## DATA

|  |   |
|--|---|
| <p><b>Western Blot</b></p>  <p><b>Detection of Human Ku80/XRCC5 by Western Blot.</b><br/>Western blot shows lysates of 293T human embryonic kidney cell line, A549 human lung carcinoma cell line, and Jurkat human acute T cell leukemia cell line. PVDF membrane was probed with 1 µg/mL of Human Ku80/XRCC5 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF5619) followed by HRP-conjugated Anti-Goat IgG Secondary Antibody (Catalog # HAF017). A specific band was detected for Ku80/XRCC5 at approximately 86 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 1.</p> | <p><b>Immunohistochemistry</b></p>  <p><b>Ku80/XRCC5 in Human Breast Cancer Tissue.</b> Ku80/XRCC5 was detected in immersion fixed paraffin-embedded sections of human breast cancer tissue using Goat Anti-Human Ku80/XRCC5 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF5619) at 1 µg/mL for 1 hour at room temperature followed by incubation with the Anti-Goat IgG VisUCyte™ HRP Polymer Antibody (Catalog # VC004). Tissue was stained using DAB (brown) and counterstained with hematoxylin (blue). Specific staining was localized to nuclei. View our protocol for IHC Staining with VisUCyte HRP Polymer Detection Reagents.</p> |
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## PREPARATION AND STORAGE

|                                |  |
|--------------------------------|--|
| <b>Reconstitution</b>          | Reconstitute at 0.2 mg/mL in sterile PBS.  |
| <b>Shipping</b>                | The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.<br>*Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C   |
| <b>Stability &amp; Storage</b> | <b>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</b> <ul style="list-style-type: none"> <li>● 12 months from date of receipt, -20 to -70 °C as supplied.</li> <li>● 1 month, 2 to 8 °C under sterile conditions after reconstitution.</li> <li>● 6 months, -20 to -70 °C under sterile conditions after reconstitution.</li> </ul> |

## BACKGROUND

Ku80 (Lupus Ku autoantigen protein p86; also ATP-dependent DNA helicase 2 subunit 2 and Ku86) is a ubiquitous 80 - 85 kDa nuclear protein that serves as a component of DNA-dependent protein kinase. In particular, it heterodimerizes with Ku70 to form a complex that binds DNA ends and select sequences, and which recruits DNA-PKcs for the purpose of phosphorylating multiple chromatin-bound proteins, including p53, Oct-1 and Sp-1. The Ku:DNA-PKcs complex participates in DNA repair, DNA replication, and VDJ recombination. Human Ku80 is 732 amino acids (aa) in length. It contains a Ku domain (aa 244 - 543) with a DNA binding motif (aa 257 - 268), and a C-terminal DNA-PKcs-binding sequence (aa 720 - 728). Over aa 402 - 565, Ku80 shares 77% aa identity with mouse Ku80.