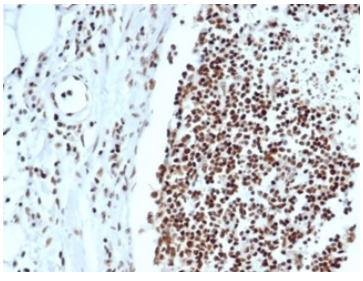
Ku80 Antibody / DNA-PK Complex Interaction Antibody [clone XRCC5/7318] (V9741)

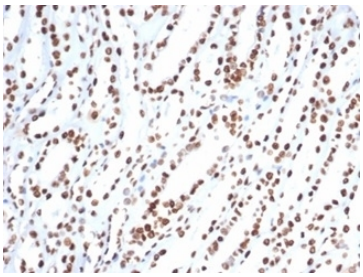
Catalog No.	Formulation	Size
V9741-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	100 ug
V9741-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	20 ug
V9741SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug

Bulk quote request

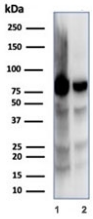
Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Host	Mouse
Clonality	Monoclonal (mouse origin)
Isotype	Mouse IgG1, kappa
Clone Name	XRCC5/7318
Purity	Protein A/G affinity
UniProt	P13010
Localization	Nucleus
Applications	Western Blot : 1-2ug/ml Immunohistochemistry (FFPE) : 1-2ug/ml
Limitations	This XRCC5 antibody is available for research use only.



Ku80 Antibody / DNA-PK Complex Interaction Antibody. Immunohistochemistry analysis of human lymph node tissue using Ku80 antibody clone XRCC5/7318. Formalin-fixed, paraffin-embedded sections show strong HRP-DAB brown nuclear staining within the lymphoid cell population, consistent with Ku80 (XRCC5) localization as part of the DNA-PK repair complex. The widespread nuclear signal reflects active assembly of DNA repair machinery in proliferative immune cells, where Ku80 participates in recruitment and stabilization of DNA-PKcs at sites of DNA damage. Hematoxylin counterstain highlights nuclei (blue), providing contrast to the Ku80-positive nuclear staining pattern.



IHC staining of FFPE human kidney tissue with XRCC5 antibody (clone XRCC5/7318). HIER: boil tissue sections in pH 9 10mM Tris with 1mM EDTA for 20 min and allow to cool before testing.



Ku80 Antibody / DNA-PK Complex Interaction Antibody for WB. Western blot analysis of Ku80 (XRCC5) in human cell lysates. Lane 1: MOLT-4 cell lysate, Lane 2: HEK293 cell lysate. A band is detected at approximately 80-86 kDa, consistent with the predicted molecular weight of Ku80 (XRCC5). The robust detection across both lymphoid and epithelial cell lines supports the role of Ku80 as a core component of the DNA-PK complex, where it interacts with DNA-PKcs to facilitate DNA end joining and repair complex assembly.

Description

Ku80 (XRCC5) is a critical component of the DNA-dependent protein kinase (DNA-PK) complex, a multi-protein assembly that plays a central role in the repair of DNA double-strand breaks. Ku80 Antibody is uniquely positioned for studies focused on protein complex interactions, enabling detection of Ku80 within the DNA-PK complex and providing insight into how repair machinery is assembled and regulated. As part of the Ku heterodimer with Ku70 (XRCC6), Ku80 binds DNA ends and facilitates recruitment of DNA-PKcs, forming an active repair complex.

Ku80 Antibody is uniquely positioned for investigating protein-protein interactions within DNA repair pathways, where Ku80 functions as a structural platform for assembly of repair components. Ku80 antibody, also known as XRCC5 antibody, detects a nuclear protein that directly interacts with DNA-PKcs and other repair factors, enabling activation of kinase activity required for efficient DNA repair. This interaction is essential for linking DNA damage recognition to downstream enzymatic processing.

The DNA-PK complex represents a critical step in the non-homologous end joining pathway, integrating DNA binding with catalytic activity. Ku80 plays a central role in stabilizing this complex and coordinating interactions between multiple proteins involved in repair. Detection of Ku80 allows researchers to study how these complexes form, how they are regulated, and how they respond to DNA damage.

In experimental systems, Ku80 can be used to examine the dynamics of protein complex assembly and disassembly, particularly in response to genotoxic stress. Changes in Ku80 interaction with DNA-PKcs or other partners can reflect alterations in repair efficiency or signaling activity. This makes Ku80 a valuable marker for studies focused on protein interaction networks and repair complex regulation.

As a member of the DNA repair protein family, Ku80 integrates structural DNA binding with recruitment of enzymatic components. Its involvement in DNA-PK complex formation makes it particularly relevant for understanding how repair processes are coordinated at the molecular level. Ku80 Antibody provides a targeted tool for analyzing protein interactions and DNA repair complex assembly.

Application Notes

Optimal dilution of the Ku80 Antibody / DNA-PK Complex Interaction Antibody should be determined by the researcher.

Immunogen

A portion of amino acids 300-500 was used as the immunogen for the Ku80 Antibody / DNA-PK Complex Interaction

Antibody.

Storage

Aliquot the XRCC5 antibody and store frozen at -20oC or colder. Avoid repeated freeze-thaw cycles.

Alternate Names

XRCC5 antibody, Ku80 DNA-PK antibody, Ku80 protein interaction antibody, XRCC5 DNA repair complex antibody, Ku80 binding partner antibody