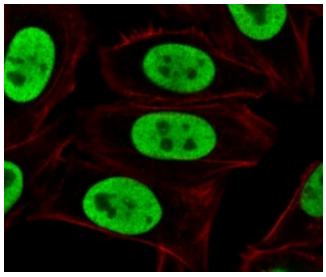
Ku70 + Ku80 Antibody / XRCC6 + XRCC5 Nuclear DNA Repair Antibody [clone LKAP1-1] (V7202)

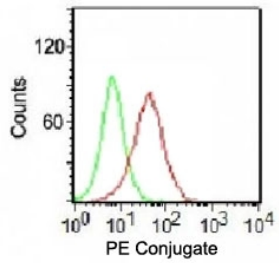
Catalog No.	Formulation	Size
V7202-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	100 ug
V7202-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	20 ug
V7202SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug

Bulk quote request

Species Reactivity	Human
Format	Purified
Host	Mouse
Clonality	Monoclonal (mouse origin)
Isotype	Mouse IgG1, kappa
Clone Name	LKAP1-1
Purity	Protein G purified
Buffer	1X PBS, pH 7.4
Gene ID	2547
Localization	Nuclear
Applications	Flow Cytometry : 0.5-1ug/10^6 cells Immunofluorescence : 1-2ug/ml
Limitations	This **Ku70 + Ku80 antibody** is available for research use only.



Ku70 + Ku80 Antibody / XRCC6 + XRCC5 Nuclear DNA Repair Antibody. Immunofluorescence analysis of paraformaldehyde-fixed human HeLa cells using Ku70 + Ku80 antibody clone LKAP1-1. The antibody signal (green) shows strong nuclear localization consistent with detection of the Ku heterodimer (XRCC6/XRCC5), with distinct enrichment within the nucleus and exclusion from the cytoplasm. Phalloidin staining (red) highlights the actin cytoskeleton and cell boundaries, providing morphological context. The staining pattern supports chromatin-associated localization of Ku70 and Ku80 and is consistent with their role in nuclear DNA repair processes.



Ku70 + Ku80 PE Antibody for FACS / XRCC6 + XRCC5 Intracellular Flow Cytometry Antibody. Flow cytometry analysis of human K562 cells using Ku70 + Ku80 antibody clone LKAP1-1. Cells were fixed and permeabilized to enable intracellular detection of the nuclear Ku heterodimer. The red histogram (PE-conjugated Ku70 + Ku80 antibody) shows a clear rightward shift compared to the green histogram (isotype control), indicating specific staining of XRCC6/XRCC5. The signal demonstrates strong separation of positive and negative populations, consistent with efficient intracellular detection of nuclear DNA repair proteins.

Description

Ku70 (XRCC6) and Ku80 (XRCC5) form a highly conserved nuclear heterodimer that functions as a central component of the non-homologous end joining pathway responsible for repairing DNA double-strand breaks. Ku70 + Ku80 Antibody (clone LKAP1-1) recognizes this DNA repair complex and is particularly well suited for visualizing nuclear protein localization and chromatin-associated staining patterns. The Ku heterodimer is predominantly localized within the nucleus, where it binds DNA ends and recruits additional repair machinery, making it a valuable marker for imaging-based studies of genomic stability and cellular stress responses.

Ku70 + Ku80 antibody, also referred to as XRCC6 antibody or XRCC5 antibody, detects ubiquitously expressed proteins whose nuclear distribution can change in response to DNA damage and cell cycle progression. This makes the Ku complex especially useful for immunofluorescence applications where spatial localization and staining pattern are critical for interpretation. Ku70 and Ku80 typically exhibit diffuse to punctate nuclear staining consistent with chromatin association, enabling researchers to assess nuclear organization and DNA repair dynamics at the single-cell level.

The clone LKAP1-1 antibody supports intracellular detection of the Ku heterodimer and provides strong performance in workflows that require clear visualization of nuclear targets. While it can be used in intracellular flow cytometry following fixation and permeabilization, its primary strength lies in applications that emphasize cellular localization, including imaging-based analysis of DNA repair protein distribution. This makes it particularly useful for studies examining nuclear architecture, DNA damage signaling, and chromosomal integrity in both normal and transformed cells.

Ku70 and Ku80 are members of the DNA repair protein family and interact with DNA-dependent protein kinase to facilitate efficient DNA end joining. Their stable nuclear localization and essential role in maintaining genome integrity make them reliable markers for studying DNA repair mechanisms and cellular stress pathways. Ku70 + Ku80 Antibody (clone LKAP1-1) provides a robust tool for detecting XRCC6 and XRCC5 in applications that prioritize nuclear localization, imaging clarity, and biologically meaningful staining patterns.

For target-specific DNA repair pathway investigations, see our Ku70 Antibody / DNA End Binding Protein Antibody and Ku80 Antibody / Non-Homologous End Joining Antibody pages featuring XRCC6- and XRCC5-associated DNA double-strand break repair validation data.

Application Notes

Titering of the Ku70 + Ku80 Antibody / XRCC6 + XRCC5 Nuclear DNA Repair Antibody may be required for optimal performance.

Immunogen

A human cell nuclear fraction was used as the immunogen for this Ku70 + Ku80 Antibody / XRCC6 + XRCC5 Nuclear DNA Repair Antibody.

Storage

Store the Ku70 + Ku80 antibody at 2-8oC (with azide) or aliquot and store at -20oC or colder (without azide).

Alternate Names

XRCC6 antibody, XRCC5 antibody, Ku70 antibody, Ku80 antibody, Ku heterodimer antibody