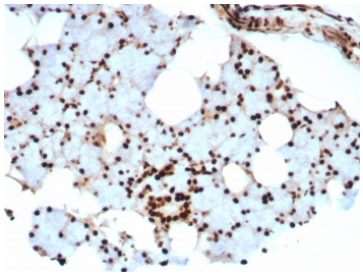
Ku80 Antibody / Chromatin-Binding Nuclear Protein Antibody [clone XRCC5/8703R] (V4952)

Catalog No.	Formulation	Size
V4952-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	100 ug
V4952-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	20 ug
V4952SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug

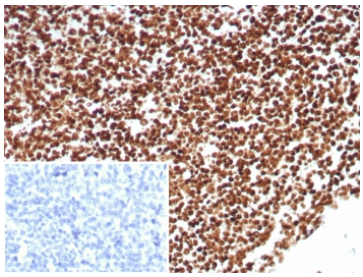
Recombinant RABBIT MONOCLONAL

Bulk quote request

Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Host	Rabbit
Clonality	Recombinant Rabbit Monoclonal
Isotype	Rabbit IgG1, kappa
Clone Name	XRCC5/8703R
Purity	Protein A/G affinity
UniProt	P13010
Localization	Nucleus
Applications	Immunohistochemistry (FFPE) : 1-2ug/ml for 30 min at RT
Limitations	This Ku80 antibody is available for research use only.



Ku80 Antibody / Chromatin-Binding Nuclear Protein Antibody. Immunohistochemistry of human salivary gland tissue using Ku80 antibody clone XRCC5/8703R. Formalin-fixed, paraffin-embedded (FFPE) sections show distinct HRP-DAB brown nuclear staining in glandular epithelial and stromal cells, consistent with chromatin-associated localization of Ku80 (XRCC5). The nuclear signal appears diffuse to punctate, reflecting DNA-binding and chromatin interaction within the nucleus. Hematoxylin counterstain highlights nuclei (blue), providing contrast to the Ku80-positive chromatin-associated staining pattern.



Ku80 Antibody / Chromatin-Binding Nuclear Protein Antibody. Immunohistochemistry of human tonsil tissue using Ku80 antibody clone XRCC5/8703R. Formalin-fixed, paraffin-embedded (FFPE) sections show strong HRP-DAB brown nuclear staining throughout the lymphoid cell population, consistent with chromatin-associated localization of Ku80 (XRCC5) in proliferative immune cells. The staining is widespread and predominantly nuclear, reflecting DNA-binding activity within chromatin. The inset shows PBS used in place of primary antibody (secondary antibody negative control), demonstrating absence of specific staining. Hematoxylin counterstain highlights nuclei (blue), providing clear contrast to the Ku80-positive chromatin-associated nuclear signal.

Description

Ku80 (XRCC5) is a chromatin-associated nuclear protein that plays a structural and functional role in maintaining genome integrity through its ability to bind DNA and organize repair complexes within the nucleus. Ku80 Antibody is uniquely positioned for studies focused on chromatin-binding proteins, enabling detection of Ku80 as it interacts with DNA and participates in the spatial organization of nuclear repair machinery. As part of the Ku heterodimer with Ku70 (XRCC6), Ku80 directly associates with chromatin and stabilizes DNA ends during repair processes.

Unlike proteins that transiently interact with DNA, Ku80 exhibits strong and often persistent chromatin association, making it an important marker for studying DNA-protein interactions and nuclear architecture. Ku80 antibody, also referred to as XRCC5 antibody, detects a nuclear protein that contributes to both the structural integrity of chromatin and the functional assembly of repair complexes. Its DNA-binding capability allows it to act as a bridge between broken DNA ends and enzymatic repair factors, reinforcing its role as a chromatin-associated scaffold protein.

This Ku80 Antibody is uniquely positioned for investigating chromatin dynamics and nuclear organization, where the spatial distribution of DNA-binding proteins provides insight into genome function. Ku80 localization within the nucleus can appear diffuse or punctate depending on chromatin state, DNA damage levels, and cellular conditions. These patterns are particularly informative in studies examining chromatin accessibility, replication stress, and DNA repair site formation.

Changes in Ku80 chromatin association can reflect alterations in cellular state, including transitions through the cell cycle, exposure to genotoxic stress, or remodeling of nuclear architecture. Because Ku80 remains closely associated with DNA, it is well suited for experiments that aim to understand how proteins interact with chromatin and how these interactions influence genome stability. This makes Ku80 a valuable marker for studies of nuclear organization and DNA-protein binding dynamics.

As a member of the DNA repair protein family, Ku80 interacts with DNA-dependent protein kinase and other chromatin-associated factors to facilitate efficient DNA end joining. Its dual role as both a structural chromatin-binding protein and a functional repair factor makes it uniquely suited for studies of nuclear protein organization. Ku80 Antibody provides a targeted and biologically relevant tool for detecting XRCC5 in research focused on chromatin interactions, nuclear structure, and genome organization.

For studies focused on XRCC6-associated DNA end recognition and double-strand break repair signaling, see our Ku70 Antibody / DNA End Binding Protein Antibody page featuring IHC and western blot validation data across multiple tumor types and human cell lines.

Application Notes

Optimal dilution of the Ku80 Antibody / Chromatin-Binding Nuclear Protein Antibody should be determined by the researcher.

Immunogen

A recombinant partial protein sequence (within amino acids 300-500) from the human protein was used as the immunogen for the Ku80 Antibody / Chromatin-Binding Nuclear Protein Antibody.

Storage

Aliquot the Ku80 antibody and store frozen at -20oC or colder. Avoid repeated freeze-thaw cycles.

Alternate Names

XRCC5 antibody, Ku80 chromatin binding antibody, Ku80 nuclear protein antibody, XRCC5 chromatin-associated antibody, Ku80 DNA-binding protein antibody