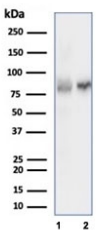
XRCC5 Antibody / Nuclear Localization and Redistribution Antibody [clone XRCC5/7315] (V8929)

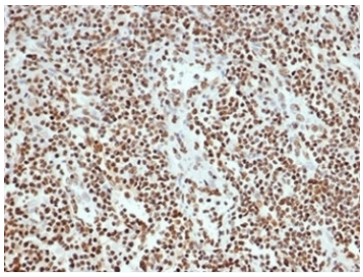
Catalog No.	Formulation	Size
V8929-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	100 ug
V8929-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	20 ug
V8929SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug

Bulk quote request

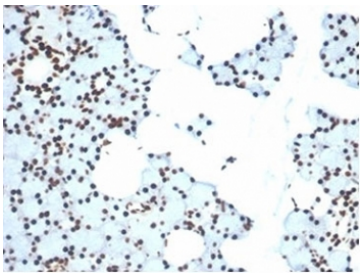
Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Host	Mouse
Clonality	Monoclonal (mouse origin)
Isotype	Mouse IgG1, kappa
Clone Name	XRCC5/7315
Purity	Protein A/G affinity
UniProt	P13010
Localization	Nucleus
Applications	Western Blot : 1-2ug/ml Immunohistochemistry (FFPE) : 1-2ug/ml
Limitations	This XRCC5/Ku80 antibody is available for research use only.



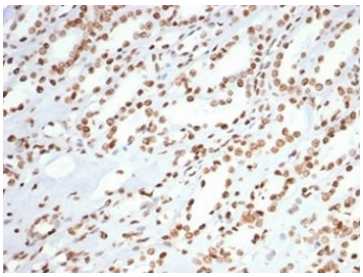
XRCC5 Antibody / Nuclear Localization and Redistribution Antibody for WB. Western blot analysis of XRCC5 (Ku80) in human cell lysates. Lane 1: MOLT-4 cell lysate, Lane 2: HEK293 cell lysate. A band is detected at approximately 80-86 kDa, consistent with the predicted molecular weight of XRCC5 (Ku80). The consistent detection across both lymphoid and epithelial-derived cells supports the widespread expression of XRCC5, providing a foundation for studying its nuclear localization and dynamic redistribution between cellular compartments.



XRCC5 Antibody Lymph Node IHC. Immunohistochemistry analysis of human lymph node tissue using XRCC5 antibody clone XRCC5/7315. Formalin-fixed, paraffin-embedded sections show strong HRP-DAB brown nuclear staining throughout the lymphoid cell population, with uniform distribution across densely packed immune cells. The predominantly nuclear signal is consistent with XRCC5 (Ku80) localization, while the widespread staining pattern reflects dynamic protein distribution in highly proliferative and activated lymphoid tissue. Hematoxylin counterstain highlights nuclei (blue), providing contrast to the XRCC5-positive nuclear staining pattern.



XRCC5 Antibody Salivary Gland IHC. Immunohistochemistry staining of FFPE human salivary gland with XRCC5/Ku80 antibody (clone XRCC5/7315). HIER: boil tissue sections in pH 9 10mM Tris with 1mM EDTA for 20 min and allow to cool before testing.



XRCC5 Antibody Colon Carcinoma IHC. Immunohistochemistry analysis of human colon carcinoma tissue using XRCC5 antibody clone XRCC5/7315. Formalin-fixed, paraffin-embedded sections show strong HRP-DAB brown nuclear staining in tumor epithelial cells, with a predominantly nuclear distribution and occasional lighter cytoplasmic signal. The staining pattern is consistent with XRCC5 (Ku80) localization and reflects dynamic intracellular distribution associated with DNA repair activity in malignant cells. Hematoxylin counterstain highlights nuclei (blue), providing contrast to the XRCC5-positive nuclear staining pattern.

Description

XRCC5 (Ku80) is a nuclear DNA repair protein that exhibits dynamic subcellular localization, making it an important marker for studying protein distribution within cells. XRCC5 Antibody is uniquely positioned for investigations focused on nuclear localization and intracellular redistribution, where spatial positioning of proteins provides insight into functional state and cellular response to environmental conditions. Under basal conditions, XRCC5 is predominantly localized to the nucleus, where it participates in DNA repair through interaction with chromatin and DNA break sites.

XRCC5 Antibody is uniquely positioned for examining changes in protein localization that occur in response to cellular stress, DNA damage, or alterations in nuclear transport mechanisms. XRCC5 antibody, also known as Ku80 antibody, detects a protein that can display both nuclear and cytoplasmic staining depending on cell type, fixation conditions, and biological context. This dual localization reflects the presence of both chromatin-bound and unbound protein pools, as well as dynamic movement between cellular compartments.

In imaging-based studies, XRCC5 localization patterns can change in response to genotoxic stress, with increased nuclear accumulation or redistribution into subnuclear regions associated with DNA repair activity. Cytoplasmic signal may also be observed, representing newly synthesized protein, protein in transit, or non-engaged pools that are not bound to DNA. These patterns provide valuable information about protein mobility, functional engagement, and the dynamic regulation of DNA repair proteins within the cell.

XRCC5 is widely expressed across tissues and plays a central role in maintaining genomic stability, but its localization is not static. Changes in localization can reflect activation of repair pathways, alterations in chromatin organization, or shifts in cellular state such as proliferation or stress response. This makes XRCC5 particularly useful for studies that rely on spatial interpretation of protein behavior rather than simple measurement of expression levels.

As a member of the DNA repair protein family, XRCC5 functions primarily within the nucleus but retains the capacity for

dynamic redistribution in response to changing cellular conditions. XRCC5 Antibody provides a valuable tool for researchers examining subcellular localization, protein trafficking, and spatial regulation of DNA repair processes. Its ability to reveal both nuclear enrichment and cytoplasmic distribution makes it especially useful for studies focused on protein localization and intracellular dynamics.

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 XRCC5 Antibody / Nuclear Localization and Redistribution Antibody should be determined by the researcher.

Immunogen

A portion of amino acids 300-500 was used as the immunogen for the XRCC5 Antibody / Nuclear Localization and Redistribution Antibody.

Storage

Aliquot the XRCC5/Ku80 antibody and store frozen at -20oC or colder. Avoid repeated freeze-thaw cycles.

Alternate Names

Ku80 antibody, XRCC5 localization antibody, Ku80 nuclear cytoplasmic antibody, XRCC5 redistribution antibody, Ku80 trafficking antibody