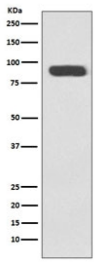
Ku80 Antibody / Genome Stability Maintenance Antibody [clone FAE-24] (RQ5399)

Catalog No.	Formulation	Size
RQ5399	Antibody in PBS with 0.02% sodium azide, 50% glycerol and 0.4-0.5mg/ml BSA	100 ul

Bulk quote request

Availability	1-2 weeks
Species Reactivity	Human
Format	Purified
Host	Rabbit
Clonality	Rabbit Monoclonal
Isotype	Rabbit IgG
Clone Name	FAE-24
Purity	Affinity purified
UniProt	P13010
Applications	Western blot: 1:5000-1:10000
Limitations	This Ku80 antibody is available for research use only.



Ku80 Antibody HeLa Tumor Cell WB. Western blot analysis of Ku80 (XRCC5) in human HeLa cell lysate. A band is detected at approximately 80 kDa, consistent with the predicted molecular weight of Ku80 (XRCC5). The clear single band supports specific detection of this DNA repair protein, which is essential for maintaining genomic stability through efficient repair of DNA double-strand breaks and preservation of chromosomal integrity.

Description

Ku80 (XRCC5) is a fundamental protein required for maintaining genome stability by ensuring accurate repair of DNA double-strand breaks and preservation of chromosomal integrity. Ku80 Antibody is uniquely positioned for studies focused on genome stability maintenance, where detection of repair proteins provides insight into how cells protect their genetic material over time. As part of the Ku heterodimer with Ku70 (XRCC6), Ku80 binds DNA ends and promotes efficient repair through the non-homologous end joining pathway.

Ku80 Antibody is uniquely positioned for investigating long-term genome maintenance mechanisms, where the balance between DNA damage and repair determines cellular health and function. Ku80 antibody, also known as XRCC5 antibody, detects a nuclear protein that plays a critical role in preventing accumulation of DNA damage and chromosomal abnormalities. Its activity is essential for maintaining stable genomes during replication and in response to environmental stress.

Loss or dysfunction of Ku80 has been associated with increased genomic instability, accumulation of DNA breaks, and susceptibility to disease, including cancer. Conversely, proper expression and function of Ku80 contribute to cellular resilience and long-term maintenance of genome integrity. This makes Ku80 a valuable marker for studying how cells prevent genetic deterioration and preserve chromosomal structure.

Ku80 is also relevant in studies of aging and disease, where accumulation of DNA damage over time can lead to functional decline. Monitoring Ku80 expression and activity provides insight into how effectively cells maintain genome stability under chronic stress conditions. This makes it useful for research into age-related genomic instability and disease progression.

As a member of the DNA repair protein family, Ku80 functions in coordination with DNA-dependent protein kinase and other repair components to preserve genome integrity. Its role extends beyond immediate repair events to long-term maintenance of chromosomal stability. Ku80 Antibody provides a focused tool for studying genome stability, DNA repair efficiency, and the biological consequences of genomic instability.

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 / Genome Stability Maintenance Antibody should be determined by the researcher.

Immunogen

A synthetic peptide specific to human Ku80 / XRCC5 was used as the immunogen for the Ku80 Antibody / Genome Stability Maintenance Antibody.

Storage

Store the Ku80 antibody at -20oC.

Alternate Names

XRCC5 antibody, Ku80 genome stability antibody, Ku80 genomic integrity antibody, XRCC5 stability marker antibody, Ku80 DNA maintenance antibody

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