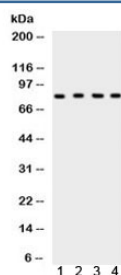


Ku80 Antibody / XRCC5 (R31953)

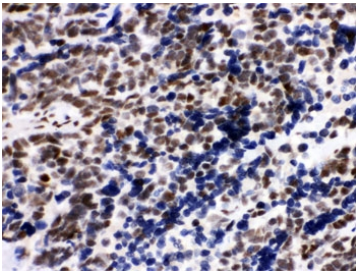
Catalog No.	Formulation	Size
R31953	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

Bulk quote request

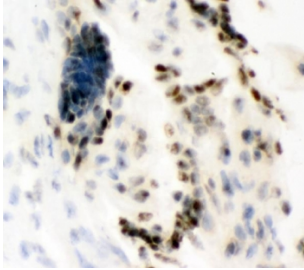
Availability	1-3 business days
Species Reactivity	Human, Mouse, Rat
Format	Antigen affinity purified
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Antigen affinity
Buffer	Lyophilized from 1X PBS with 2.5% BSA and 0.025% sodium azide
UniProt	P13010
Localization	Nuclear
Applications	Western Blot : 0.1-0.5ug/ml Immunohistochemistry (FFPE) : 0.5-1ug/ml Immunohistochemistry (Frozen) : 0.5-1ug/ml Flow Cytometry : 1-3ug/million cells Immunofluorescence/Immunocytochemistry : 2-4ug/ml
Limitations	This Ku80 antibody is available for research use only.



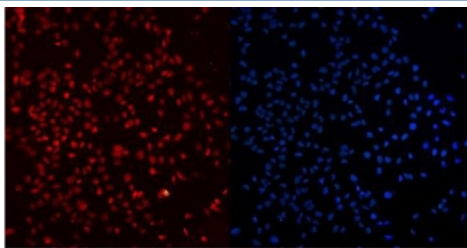
Western blot testing of 1) rat testis, 2) rat thymus, 3) human HeLa and 4) mouse NIH3T3 lysate with Ku80 antibody. Expected molecular weight: 80~86 kDa.



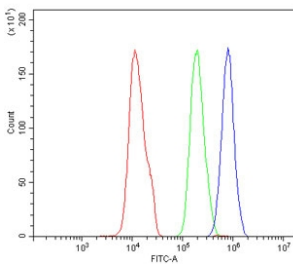
IHC testing of FFPE human lung cancer tissue with Ku80 antibody. HIER: Boil the paraffin sections in pH 6, 10mM citrate buffer for 20 minutes and allow to cool prior to staining.



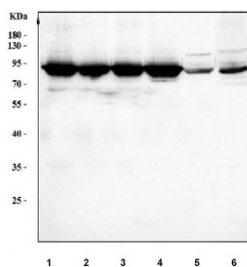
IHC testing of frozen human placenta with Ku80 antibody.



Immunofluorescent staining of FFPE human U-2 OS cells with Ku80 antibody (red) and DAPI nuclear stain (blue). HIER: Boil the paraffin sections in pH 6, 10mM citrate buffer for 20 minutes and allow to cool prior to staining.



Flow cytometry testing of human SiHa cells with Ku80 antibody at 1ug/million cells (blocked with goat sera); Red=cells alone, Green=isotype control, Blue= Ku80 antibody.



Western blot testing of 1) human HeLa, 2) human A549, 3) human 293T, 4) human HepG2, 5) rat brain and 6) mouse brain tissue lysate with Ku80 antibody. Expected molecular weight: 80~86 kDa.

Description

XRCC5 (X-ray Repair, Complementing Defective, In Chinese Hamster, 5), also known as Ku80 or Ku86, is a protein that in humans, is encoded by the XRCC5 gene. The XRCC5 gene encodes the 80-kD subunit of the Ku autoantigen, a heterodimer which contributes to genomic integrity through its ability to bind DNA double-strand breaks and facilitate repair by the nonhomologous end joining (NHEJ) pathway. The XRCC5 gene is mapped to 2q35. Human colon cancer cells heterozygous for Ku86 are haploinsufficient with an increase in polyploid cells, a reduction in cell proliferation, elevated p53 levels, and a slight hypersensitivity to ionizing radiation. Functional inactivation of the second Ku86 allele results in cells with a drastically reduced doubling time. The Ku86 locus is essential in human somatic tissue culture cells by experiments demonstration. A rare microsatellite polymorphism in XRCC5 is associated with cancer in patients of varying radiosensitivity.

Application Notes

Optimal dilution of the Ku80 antibody should be determined by the researcher.

Immunogen

Amino acids FSEEQRFNNFLKALQEKVEIKQLNHFWE of human Ku80 were used as the immunogen for the Ku80 antibody.

Storage

After reconstitution, the Ku80 antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.