

For Research Use Only

# XRCC5/Ku80 Polyclonal antibody

Catalog Number: 16389-1-AP

Featured Product

31 Publications



## Basic Information

### Catalog Number:

16389-1-AP

### Size:

150ul, Concentration: 800 ug/ml by Nanodrop;

### Source:

Rabbit

### Isotype:

IgG

### Immunogen Catalog Number:

AG9454

### GenBank Accession Number:

BC019027

### GeneID (NCBI):

7520

### UNIPROT ID:

P13010

### Full Name:

X-ray repair complementing defective repair in Chinese hamster cells 5 (double-strand-break rejoining)

### Calculated MW:

732 aa, 83 kDa

### Observed MW:

80-83 kDa

### Purification Method:

Antigen affinity purification

### Recommended Dilutions:

WB 1:500-1:2000

IP 0.5-4.0 ug for 1.0-3.0 mg of total protein lysate

IHC 1:600-1:2400

IF/ICC 1:400-1:1600

## Applications

### Tested Applications:

WB, IHC, IF/ICC, IP, ELISA

### Cited Applications:

WB, IHC, IF, IP, CoIP, ChIP, RIP

### Species Specificity:

human, mouse

### Cited Species:

human, mouse, pig

### Positive Controls:

**WB**: HepG2 cells, K-562 cells, HEK-293 cells, A431 cells, human liver tissue, HeLa cells

**IP**: HEK-293 cells,

**IHC**: human colon cancer tissue, human lung cancer tissue

**IF/ICC**: HeLa cells, HepG2 cells

**Note-IHC: suggested antigen retrieval with TE buffer pH 9.0; (\*) Alternatively, antigen retrieval may be performed with citrate buffer pH 6.0**

## Background Information

There are at least two pathways for eukaryotes to repair DNA double-strand breaks: homologous recombination and nonhomologous end joining (NHEJ). The core NHEJ machinery includes XRCC4, DNA Ligase IV and the DNA-dependent protein kinase complex, which consists of the DNA end-binding XRCC5/XRCC6 heterodimer and the catalytic subunit PRKDC. The heterodimer of XRCC5/XRCC6 enhanced the affinity of the catalytic subunit PRKDC to DNA by 100-fold. Once the XRCC5/6 dimer association with NAA15, it can bind to the osteocalcin promoter and activate osteocalcin expression. The XRCC5/6 dimer acts as a negative regulator of transcription when together with APEX1. Some published papers indicated that the MW of XRCC5 is 86kDa, while more papers suggested that XRCC5 is a 80kDa protein, as it was firstly introduced in publication. Thus, Ku80 and Ku86 are the same protein.

## Notable Publications

Author	Pubmed ID	Journal	Application
Xin Wen	36249018	Front Oncol	WB
Yingying Shi	34489398	Cell Death Dis	WB
L Hu	27593939	Oncogene	IF

## Storage

### Storage:

Store at -20°C. Stable for one year after shipment.

### Storage Buffer:

PBS with 0.02% sodium azide and 50% glycerol pH 7.3.

Aliquoting is unnecessary for -20°C storage

\*\*\* 20ul sizes contain 0.1% BSA

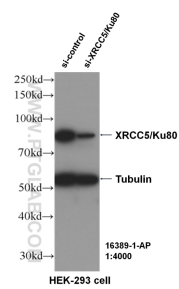
For technical support and original validation data for this product please contact:

T: 1 (888) 4PTGLAB (1-888-478-4522) (toll free in USA), or 1(312) 455-8498 (outside USA)

E: proteintech@ptglab.com  
W: ptglab.com

This product is exclusively available under Proteintech Group brand and is not available to purchase from any other manufacturer.

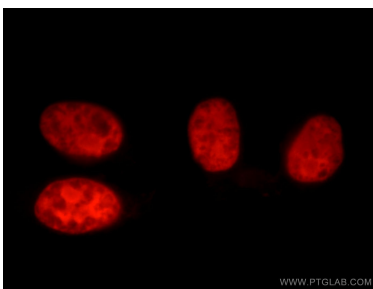
Selected Validation Data



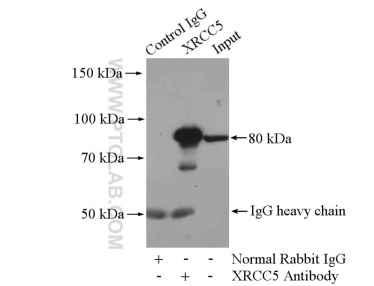
WB result of Ku80 antibody (16389-1-AP, 1:4000) with si-Control and si-Ku80 transfected HEK-293 cells.



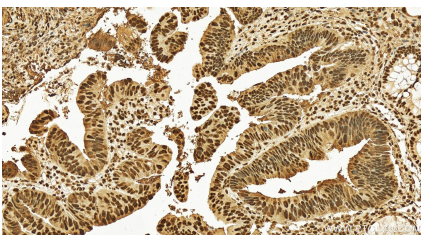
HepG2 cells were subjected to SDS PAGE followed by western blot with 16389-1-AP (XRCC5/Ku80 antibody) at dilution of 1:1000 incubated at room temperature for 1.5 hours.



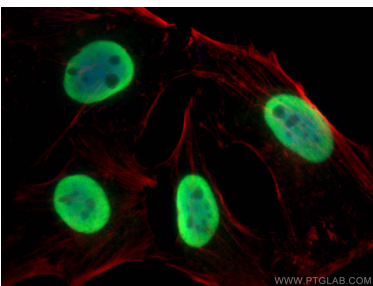
Immunofluorescent analysis of HepG2 cells, using XRCC5 antibody 16389-1-AP at 1:50 dilution and Rhodamine-labeled goat anti-rabbit IgG (red).



IP result of anti-XRCC5/Ku80 (IP:16389-1-AP, 4ug; Detection:16389-1-AP 1:1000) with HEK-293 cells lysate 1200ug.



Immunohistochemical analysis of paraffin-embedded human colon cancer tissue slide using 16389-1-AP (XRCC5/Ku80 antibody) at dilution of 1:1200 (under 20x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).



Immunofluorescent analysis of (4% PFA) fixed HeLa cells using XRCC5/Ku80 antibody (16389-1-AP) at dilution of 1:800 and Multi-rAb CoraLite ® Plus 488-Goat Anti-Rabbit Recombinant Secondary Antibody (H+L) (RGAR002), CL594-phalloidin (red).