For Research Use Only

XRCC5/Ku80 Monoclonal antibody

Catalog Number:66546-1-Ig 7 Publications

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Basic Information

Catalog Number:
66546-1-Ig

Concentration:
1800 ug/ml

Source:
Mouse

Isotype:
IgG1

Immunogen Catalog Number:
AG9512

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:
Protein G purification

CloneNo.:
2G5E7

Recommended Dilutions:
WB 1:5000-1:50000
IP 0.5-4.0 ug for 1.0-3.0 mg of total protein lysate
IHC 1:500-1:2000
IF/ICC 1:200-1:800

Applications

Tested Applications:
WB, IHC, IF/ICC, IP, ELISA

Cited Applications:
WB, IF

Species Specificity:
human, mouse, rat

Cited Species:
human, rat

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

Positive Controls:

WB : HeLa cells, HEK-293 cells, HepG2 cells, MCF-7 cells

IP : HeLa cells,

IHC : human lung cancer tissue, human breast cancer tissue

IF/ICC : HeLa cells,

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 heterdimer of XRCC5/XRCC6 enhanced teh 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 publised papers indicated that the MW of XRCC5 is 86kDa, while more papers suggested that XRCC5 is a 80kDa protein, as it was firstly introducted in publication. Thus, Ku80 and Ku86 are the same protein.

Notable Publications

Author	Pubmed ID	Journal	Application
Na Yu	35771585	Cell Biol Int	IF
Tao Wang	35036867	iScience	IF
Chen Zhou	35998796	Cancer Lett	WB

Storage

Storage:
Store at -20°C. Stable for one year after shipment.
Storage Buffer:
PBS with 0.02% sodium azide and 50% glycerol
Aliquoting is unnecessary for -20°C storage

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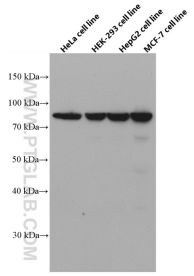
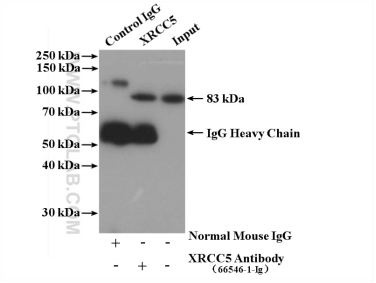
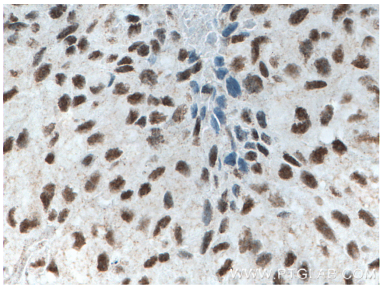
Selected Validation Data



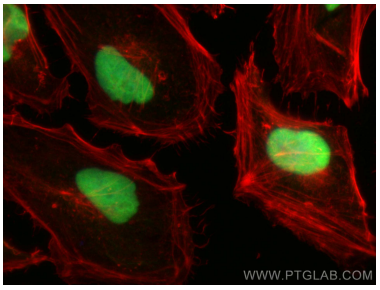
Various lysates were subjected to SDS PAGE followed by western blot with 66546-1-Ig (XRCC5 antibody) at dilution of 1:20000 incubated at room temperature for 1.5 hours.



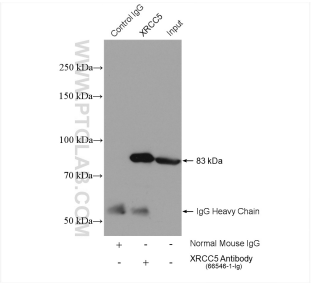
IP result of anti-XRCC5/Ku80 (IP:66546-1-Ig, 5ug; Detection:66546-1-Ig 1:20000) with HeLa cells lysate 3200 ug.



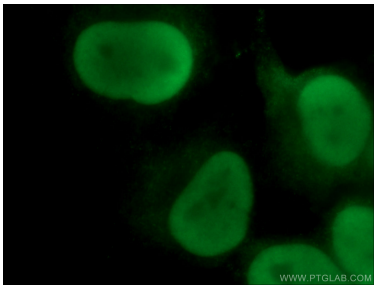
Immunohistochemical analysis of paraffin-embedded human lung cancer tissue slide using 66546-1-Ig (XRCC5 antibody) at dilution of 1:1000 (under 40x lens. Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).



Immunofluorescent analysis of (4% PFA) fixed HeLa cells using XRCC5 antibody (66546-1-Ig, Clone: 2G5E7) at dilution of 1:400 and CoraLite®488-Conjugated AffiniPure Goat Anti-Mouse IgG(H+L) (SA00013-1), CL594-phalloidin (red).



IP result of anti-XRCC5/Ku80 (IP:66546-1-Ig, 5ug; Detection:66546-1-Ig 1:40000) with HeLa cells lysate 640 ug.



Immunofluorescent analysis of (4% PFA) fixed HeLa cells using 66546-1-Ig (XRCC5 antibody) at dilution of 1:100 and Alexa Fluor 488-conjugated AffiniPure Goat Anti-Mouse IgG(H+L).