

# CoraLite® Plus 488-conjugated XRCC5/Ku80 Monoclonal antibody

Catalog Number: CL488-66546

## Basic Information

<b>Catalog Number:</b> CL488-66546	<b>GenBank Accession Number:</b> BC019027	<b>Purification Method:</b> Protein G purification
<b>Concentration:</b> 1000 ug/ml	<b>GeneID (NCBI):</b> 7520	<b>CloneNo.:</b> 2G5E7
<b>Source:</b> Mouse	<b>UNIPROT ID:</b> P13010	<b>Recommended Dilutions:</b> IF/ICC 1:50-1:500
<b>Isotype:</b> IgG1	<b>Full Name:</b> X-ray repair complementing defective repair in Chinese hamster cells 5 (double-strand-break rejoining)	<b>Excitation/Emission maxima wavelengths:</b> 493 nm / 522 nm
<b>Immunogen Catalog Number:</b> AG9512	<b>Calculated MW:</b> 732 aa, 83 kDa	
	<b>Observed MW:</b> 80-83 kDa	

## Applications

<b>Tested Applications:</b> IF/ICC, FC (Intra)	<b>Positive Controls:</b> IF/ICC : HeLa cells, HepG2 cells
<b>Species Specificity:</b> human, mouse, rat	

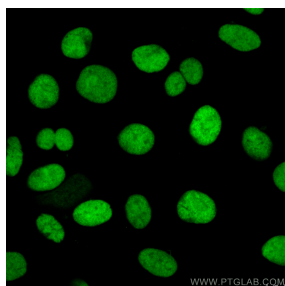
## Background Information

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.

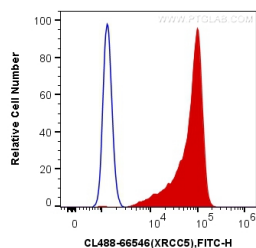
## Storage

**Storage:**  
Store at -20°C. Avoid exposure to light. Stable for one year after shipment.  
**Storage Buffer:**  
PBS with 50% glycerol, 0.05% Proclin300, 0.5% BSA  
**Aliquoting is unnecessary for -20°C storage**

## Selected Validation Data



Immunofluorescent analysis of (4% PFA) fixed HepG2 cells using CL488-66546 (XRCC5 antibody) at dilution of 1:100.



1X10<sup>6</sup> HeLa cells were intracellularly stained with 0.4 ug CoraLite® Plus 488 Anti-Human XRCC5 (CL488-66546, Clone:2G5E7) (red), or 0.4 ug Mouse IgG1 Isotype Control (CL488-66360, Clone: T1F8D3F10) (blue). Cells were fixed and permeabilized with Transcription Factor Staining Buffer Kit (PF00011).

Immunofluorescent analysis of (4% PFA) fixed HeLa cells using CoraLite® Plus 488 XRCC5 antibody (CL488-66546, Clone: 2G5E7) at dilution of 1:200.