



# XRCC4 Monoclonal Antibody(5C10)

|                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
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| <b>Catalog No</b>                  | YP-Ab-00115                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>Isotype</b>                     | IgG                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Reactivity</b>                  | Human                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Applications</b>                | WB;IHC;IF;IP                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Gene Name</b>                   | XRCC4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Immunogen</b>                   | Synthetic Peptide of XRCC4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Specificity</b>                 | The antibody detects endogenous XRCC4 proteins.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>Formulation</b>                 | PBS, pH 7.4, containing 0.5%BSA, 0.02% sodium azide as Preservative and 50% Glycerol.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Source</b>                      | Monoclonal, Mouse                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Purification</b>                | The antibody was affinity-purified from mouse ascites by affinity-chromatography using specific immunogen.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Dilution</b>                    | WB: 1:2000 IP:1:200 IF 1:200 IHC 1:50-300                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>Concentration</b>               | 1 mg/ml                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Purity</b>                      | ≥90%                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>Storage Stability</b>           | -20°C/1 year                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Synonyms</b>                    | DNA repair protein XRCC4;hXRCC4;Protein XRCC4;C-terminus;X-ray repair cross-complementing protein 4;XRCC4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>Observed Band</b>               | 38kD                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>Calculated Molecular Weight</b> | 38kD                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>Cell Pathway</b>                | Nucleus . Chromosome . Localizes to site of double-strand breaks. .; [Protein XRCC4, C-terminus]: Cytoplasm . Translocates from the nucleus to the cytoplasm following cleavage by caspase-3 (CASP3). .                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Tissue Specificity</b>          | Widely expressed.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Function</b>                    | function:Involved in DNA non-homologous end joining (NHEJ) required for double-strand break repair and V(D)J recombination. Binds to DNA and to DNA ligase IV (LIG4). The LIG4-XRCC4 complex is responsible for the NHEJ ligation step, and XRCC4 enhances the joining activity of LIG4. Binding of the LIG4-XRCC4 complex to DNA ends is dependent on the assembly of the DNA-dependent protein kinase complex DNA-PK to these DNA ends., PTM:Monoubiquitinated.,PTM:Phosphorylated by PRKDC. The phosphorylation seems not to be necessary for binding to DNA. Phosphorylation by CK2 promotes interaction with APTX.,PTM:Sumoylation at Lys-210 is required for |



nuclear localization and recombination efficiency. Has no effect on ubiquitination.,similarity:Belongs to the XRCC4 family.,subunit:Homodimer and homotetramer in solution. The homodimer associates with LIG4, and the LIG4-XRCC4 complex associates in a DNA-dep

**Background**

The protein encoded by this gene functions together with DNA ligase IV and the DNA-dependent protein kinase in the repair of DNA double-strand breaks. This protein plays a role in both non-homologous end joining and the completion of V(D)J recombination. Mutations in this gene can cause short stature, microcephaly, and endocrine dysfunction (SSMED). Alternative splicing generates several transcript variants. [provided by RefSeq, Dec 2015],

**matters needing attention**

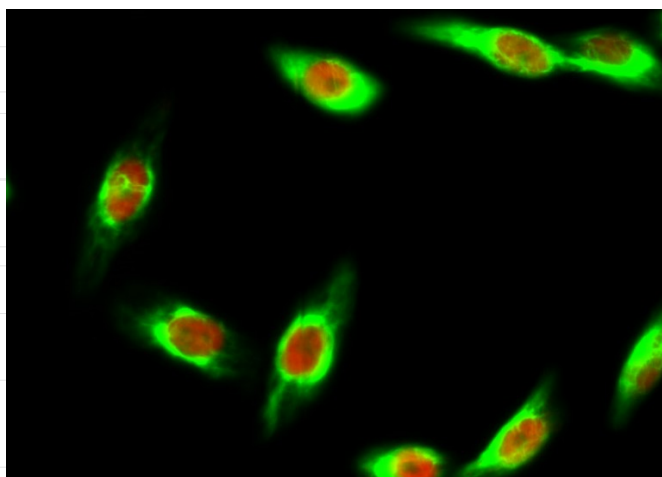
Avoid repeated freezing and thawing!

**Usage suggestions**

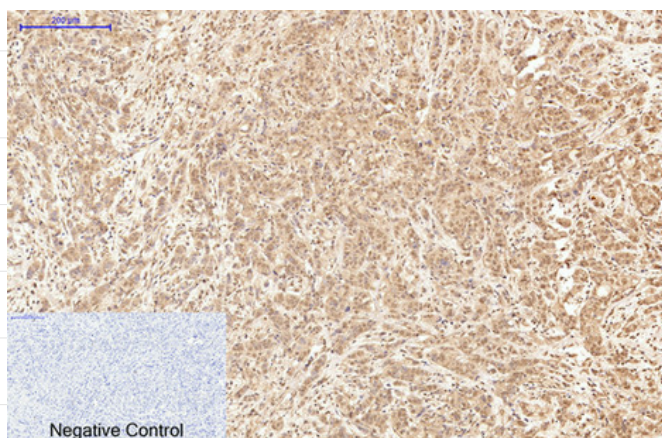
This product can be used in immunological reaction related experiments. For more information, please consult technical personnel.



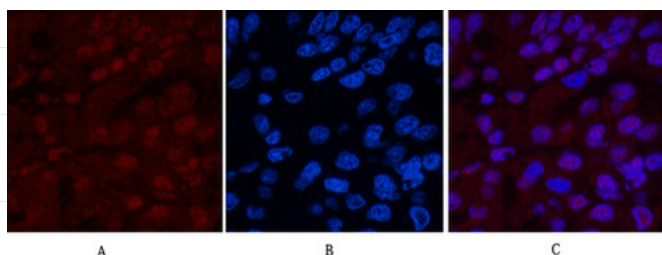
## Products Images



Immunofluorescence analysis of Hela cell. 1,Bak Polyclonal Antibody(green) was diluted at 1:200(4° overnight). (red) was diluted at 1:200(4° overnight). 2, Goat Anti Rabbit Alexa Fluor 488 Catalog:RS3211 was diluted at 1:1000(room temperature, 50min). Goat Anti Mouse Alexa Fluor 594 Catalog:RS3608 was diluted at 1:1000(room temperature, 50min).



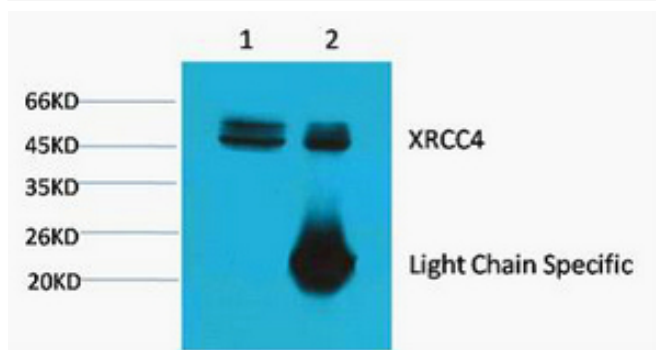
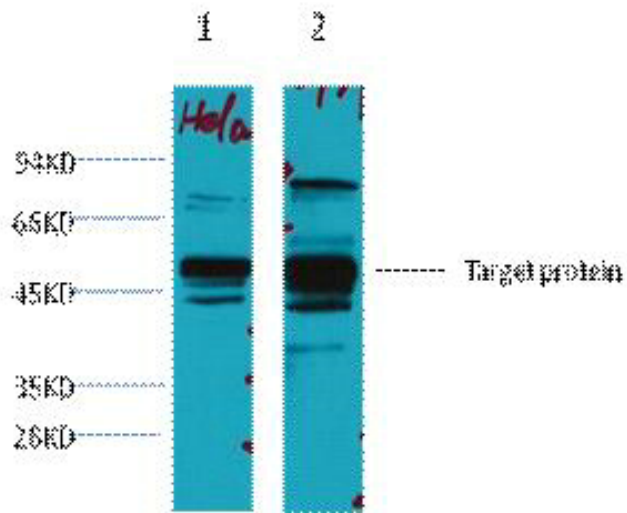
Immunohistochemical analysis of paraffin-embedded Human-breast-cancer tissue. 1,XRCC4 Monoclonal Antibody(5C10) was diluted at 1:200(4°C,overnight). 2, Sodium citrate pH 6.0 was used for antibody retrieval(>98°C,20min). 3,Secondary antibody was diluted at 1:200(room temperature, 30min). Negative control was used by secondary antibody only.



Immunofluorescence analysis of Human-liver-cancer tissue. 1,XRCC4 Monoclonal Antibody(5C10)(red) was diluted at 1:200(4°C,overnight). 2, Cy3 labeled Secondary antibody was diluted at 1:300(room temperature, 50min).3, Picture B: DAPI(blue) 10min. Picture A:Target. Picture B: DAPI. Picture C: merge of A+B



Western blot analysis of 1) Hela, 2) 293T, diluted at 1:3000.



1) Input: Hela Cell Lysate 2) IP product: IP dilute 1:200