

Product datasheet for **MC219608**

Xrcc6 (NM_010247) Mouse Untagged Clone

Product data:

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| Product Type: | Expression Plasmids |
| Product Name: | Xrcc6 (NM_010247) Mouse Untagged Clone |
| Tag: | Tag Free |
| Symbol: | Xrcc6 |
| Synonyms: | 70kDa; G22p1; Ku70 |
| Mammalian Cell Selection: | Neomycin |
| Vector: | pCMV6-Entry (PS100001) |
| E. coli Selection: | Kanamycin (25 ug/mL) |



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Fully Sequenced ORF: >MC219608 representing NM_010247
 Red=Cloning site Blue=ORF Orange=Stop codon

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGTCAGAGTGGGAGTCTACTACAAAACCTGAGGGCGAGGAAGAGGAAGAGGAGGAGAGAGCCCCGACA
 CAGGTGGAGAATAAAATATTCAGGAAGAGATAGCTTGATTTTTCTGGTTGATGCCTCCAGGGCTATGTT
 CGAATCTCAGGGTGAAGATGAACTCACACCTTTTGATATGAGCATCCAGTGTATCCAGAGTGTGTACACC
 AGTAAGATCATAAGCAGCGATCGGGATCTCCTGGCAGTGGTGTCTATGGAACCGAGAAAGATAAAAATT
 CAGTGAATTTCAAAAATATTTATGTCTTACAAGATTTGGACAACCCAGGCGCTAAGCGAGTGTAGAGCT
 CGACCAGTTTAAGGGACAACAGGGGAAGAAGCACTTCCGAGACACGGTTGGCCATGGGTCTGACTACTCT
 TTGAGTGAAGTGTCTGGGTCTGTGCCAACCTCTCAGCGACGTCCAGCTCAAGATGAGTACAAGAGGA
 TCATGCTGTTACCAATGAAGACGACCCCATGGCCGTGACAGTGTAAAGCCAGCCGGGCCAGGACCAA
 AGCCAGCGACCTCCGGGACACTGGGATCTTCTTGACTTGATGCATCTGAAGAAGCCAGGAGGCTTTGAT
 GTATCCGTGTTTACAGGGACATCATCACCCCGCTGAGGACGAGGACCTTGGGGTTCACCTCGAGGAGT
 CAAGCAAGCTGGAAGACCTGCTAAGGAAGTTCGAGCCAAGGAGACCAAAAAGCGAGTTCTGTCCAGGTT
 AAAGTTTAAAGCTCGGTGAAGACGTAGTACTCATGGTGGGCATTTATAACTTGGTCCAGAAAGCTAACAAG
 CCTTTTCCAGTGAGACTCTATCGGGAAACAAATGAACCAAGTGAACCAAGACAAGGACTTTTAAATGTAA
 ACACCGGCAGTCTACTCTGCCTAGTGACACCAAGCGTCTCTGACTTATGGGACACGTGAGATTGTGCT
 GGAGAAAGAGGAGACAGAGGAGCTGAAGCGTTTGTGAGCCAGGTTTGTCTCATGGGCTTTAAGCCC
 ACGGTGATGCTGAAGAAGCAGCACTACCTGAGGCCCTCTCTGTTCTGTACCCGGAGGAGTCCCTGGTCA
 GTGGGAGCTCAACCTTGTTCAGCGCTCTGCTCACCAAGTGTGTGGAGAAGGAGTATAGCAGTGTGTAG
 ATACACACCCCGGAAGAACGTCTCCCGTATTTTGTGGCTTTGGTGCCCAAGGAAGGAGCTGGATGAT
 CAGAACATTCAGGTGACTCCAGGAGGCTTCCAGCTTGTCTTCCCTTATGCCGATGACAAGCGGAAGG
 TGCCCTTTACTGAGAAGGTGACGGCAACCCAGGAGCAGATAGACAAGATGAAGGCCATTGTTCAAAAAGCT
 CCGCTTACATACAGGAGCGACAGTTTTGAGAATCCAGTCTGCAGCAGCACTTCCGCAACCTGGAGGCC
 CTAGCTTTGGACATGATGGAGTCGGAGCAAGTGGTAGATCTGACACTACCAAGTTGAAGCCATAAAGA
 AAAGACTGGGTTCCCTGGCAGATGAGTTTAAAGAACTTGTCTATCCTCCAGGTTAATCCCGAGGGAAA
 AGTTGCCAAGAGAAAACAAGATGATGAAGTTCTACGAGTAAAAAGCCCAAGGTAGAGTTATCAGAAGAA
 GAGCTGAAGGCCATTTTCGTAAGGGCACACTGGGTAAGCTCACTGTACCTACACTGAAGGACATATGCA
 AGGCTCATGGGCTTAAGAGTGGGCCGAAGAAGCAGGAAGTCTAGATGCTTATCAGACACTTGGAGAA
 GAACTGA

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

- Restriction Sites:** SgfI-MluI
- ACCN:** NM_010247
- Insert Size:** 1827 bp
- OTI Disclaimer:** Our molecular clone sequence data has been matched to the reference identifier above as a point of reference. Note that the complete sequence of our molecular clones may differ from the sequence published for this corresponding reference, e.g., by representing an alternative RNA splicing form or single nucleotide polymorphism (SNP).
- Components:** The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).

Reconstitution Method:

1. Centrifuge at 5,000xg for 5min.
2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.
3. Close the tube and incubate for 10 minutes at room temperature.
4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.
5. Store the suspended plasmid at -20°C. The DNA is stable for at least one year from date of shipping when stored at -20°C.

RefSeq: [NM_010247.2](#), [NP_034377.2](#)

RefSeq Size: 2113 bp

RefSeq ORF: 1827 bp

Locus ID: 14375

UniProt ID: [P23475](#)

Cytogenetics: 15 38.33 cM

Gene Summary: Single-stranded DNA-dependent ATP-dependent helicase. Has a role in chromosome translocation. The DNA helicase II complex binds preferentially to fork-like ends of double-stranded DNA in a cell cycle-dependent manner. It works in the 3'-5' direction. Binding to DNA may be mediated by XRCC6. Involved in DNA non-homologous end joining (NHEJ) required for double-strand break repair and V(D)J recombination. The XRCC5/6 dimer acts as regulatory subunit of the DNA-dependent protein kinase complex DNA-PK by increasing the affinity of the catalytic subunit PRKDC to DNA by 100-fold. The XRCC5/6 dimer is probably involved in stabilizing broken DNA ends and bringing them together. The assembly of the DNA-PK complex to DNA ends is required for the NHEJ ligation step. Required for osteocalcin gene expression. Probably also acts as a 5'-deoxyribose-5-phosphate lyase (5'-dRP lyase), by catalyzing the beta-elimination of the 5' deoxyribose-5-phosphate at an abasic site near double-strand breaks. 5'-dRP lyase activity allows to 'clean' the termini of abasic sites, a class of nucleotide damage commonly associated with strand breaks, before such broken ends can be joined. The XRCC5/6 dimer together with APEX1 acts as a negative regulator of transcription. Plays a role in the regulation of DNA virus-mediated innate immune response by assembling into the HDP-RNP complex, a complex that serves as a platform for IRF3 phosphorylation and subsequent innate immune response activation through the cGAS-STING pathway (By similarity).[UniProtKB/Swiss-Prot Function]