

## Product datasheet for **MC220523**

### Polh (NM\_030715) Mouse Untagged Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Polh (NM_030715) Mouse Untagged Clone
Tag:	Tag Free
Symbol:	Polh
Synonyms:	RAD30A; XPV
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Cell Selection:	Neomycin



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**Fully Sequenced ORF:** >MC220523 representing NM\_030715  
 Red=Cloning site Blue=ORF Orange=Stop codon

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGCATCGCC**

ATGGCTCTGGGCAGAATCGAGTGGTTGCTCTTGTAGACATGGACTGCTTTTTTGTACAAGTGGAACAGC  
 GGC AAAATCCTCATTGAGGAATAAACCTTGTGCAGTTGTACAGTACAAATCATGGAAAGGTGGTGAAT  
 TATTGCAGTTAGCTATGAAGCCCAGCATTGGTGTACTAGAAACATGTGGCGGATGATGCTAAGAAG  
 TTATGTCCAGATCTTCTCCTGGCACAAGTTCGTGAGTCCCGTGGAAAAGCTAACCTCACCAAGTACCGGG  
 AAGCTAGTGTGAAGTATGGAGATAATGTCTATTTTGTGTGATTGAACGTGCCAGCATCGATGAGGC  
 TTATATAGATTTGACCAGTGTGTACAAGAAAGACTTCAAAGTTACAAGGTGAGCCTATCTCAGCAGAT  
 TTGCTGCCAAGCACTTACATTGAAGGGTGCCTCCGAGGCCCTACAGTAGAAGAGACTGTTCAAGAAAGAGG  
 CTATTCGAAACAAGGCTTGCTTCAGTGGCTTGATTCTCTTCAGAGTGATGATCCCACTCTCCAGACCT  
 CAGGCTGACTGTGGGAGCCATGATTGTGGAAGAAATGAGAGCAGCCATAGAGAGTAAAGACTGGCTTCCAG  
 TGTTCACTGGAATCTCACACAATAAGGTCTGGCAAACTTGCTTGTGGACTAAATAAGCCCAACCGCC  
 AAACCCTGGTCTCACATGGGTGAGTCCACAGCTCTTCAGCCAGATGCCAATCCGTAATAAATCCGAAGTCT  
 TGGAGGAAAGCTAGGGGCTTCTGTATTGAAGTCTTGGGATAGAATACATGGGTGACCTGACCCAGTTC  
 ACTGAATCCCAGTCCAGAGTCAATTTGGAGAGAAGAAATGGGTCTTGGCTGTATGCCATGTGTGAGGTA  
 TTGAACACGATCCAGTTAAACCCAGGCAGTTACCTAAACTATTGGTGCAGCAAGAACTCCCAGGGAA  
 AACAGCTCTGGCTACTCGGGAGCAGGTACAGTGGTGGCTTTTGCAGTTAGCTCTGGAAGTGGAGAGAGG  
 CTAACCAAGATCGAAATGATAATGACCGCGTGGCCACTCAGCTGGTGTGATGATCGTTTTTCAGGGAG  
 ACAGGCGTCTCAGCAGCCTGCGGCGGTGCTGTGCCCTCCCTCGCTATGACGCTCACAAGATGAGCCAGGA  
 CGCATTGCTGCCATCAGGAAGTGAATACATCTGGAATCCAAACTGAGTGGTCCCCTCCTCTCACAAATG  
 CTCTTCTCTGCGCTACCAAGTTCTCTGCGGCTGCCCTCCAGCTTGCACGGATATCACTGCGTTCTGA  
 GTAGCGACTCAAGTTGTGAGCCAAAGGTGCCAATTGCCAGCTCTGAGACTAGGACCCAGGGGTCTGGCCC  
 AGCTGTACCAACCTCTAAAGAGGCAGCCACATCTAGCGTCTTTTTTCAAAGCTGCCAAAAGCAG  
 AGAATGAAAGAGACTTCTTTGTACCTCTTAACACAGCCACAGAGAAGTTATCATCCAAGCCTTCACTTG  
 TGTTCAAAGCAGCCAAACCACAGGAAGTCACTTTCTTTAAGCAGAAGAGCCTGCTGCTCCAGCACAC  
 ACAGCTTAGTAAGTCTGCGGCTCCTGACCTCCACAGGCCAGCCCTGCAGCGCAACCAAGCTGTCTGCCA  
 GCAGAGTGTGAGACAGTGGTCTGATGATGGAGCGGTGAAGCCAGTATCCTCTAAAGCAGTGTCTACAG  
 AAATGAATGTGGCTGGGACAGTCCAAACGTGCTCGATTCTCCAGCTTACAACCTCAGGAGGTGACCCA  
 AAGGGCCACTGAGGACCAAGTGCTCTGTGAGAAGTGTGACTCCCTGGTCCAGTGTGGGACATGCCAGAA  
 CACACGGACTACCAATTTGCATTGGAGTTGAGAAAGTCTTTTTTGCAGCCTTGTACTTCAAACCCAGG  
 CTATTCCTGCCGTGCTCCTCAGGGCAAAGAAATCCCAAGAGTCCCTCGGCTTCCAGTAGTAAGCGCCT  
 TAGGCCCATGGCATGCAGACGCTGGAATCGTTTTTTAAGCCACTGACACATTAG

**ACGCGT**ACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Restriction Sites:** SgfI-MluI

**ACCN:** NM\_030715

**Insert Size:** 2085 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).

<b>Components:</b>	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).
<b>Reconstitution Method:</b>	<ol style="list-style-type: none"><li>1. Centrifuge at 5,000xg for 5min.</li><li>2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.</li><li>3. Close the tube and incubate for 10 minutes at room temperature.</li><li>4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.</li><li>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.</li></ol>
<b>RefSeq:</b>	<u>NM_030715.3, NP_109640.1</u>
<b>RefSeq Size:</b>	2580 bp
<b>RefSeq ORF:</b>	2085 bp
<b>Locus ID:</b>	80905
<b>UniProt ID:</b>	<u>Q9JJN0</u>
<b>Cytogenetics:</b>	17 C
<b>Gene Summary:</b>	<p>DNA polymerase specifically involved in the DNA repair by translesion synthesis (TLS) (PubMed:10871396). Due to low processivity on both damaged and normal DNA, cooperates with the heterotetrameric (REV3L, REV7, POLD2 and POLD3) POLZ complex for complete bypass of DNA lesions. Inserts one or 2 nucleotide(s) opposite the lesion, the primer is further extended by the tetrameric POLZ complex. In the case of 1,2-intrastrand d(GpG)-cisplatin cross-link, inserts dCTP opposite the 3' guanine (By similarity). Particularly important for the repair of UV-induced pyrimidine dimers (PubMed:10871396). Although inserts the correct base, may cause base transitions and transversions depending upon the context. May play a role in hypermutation at immunoglobulin genes. Forms a Schiff base with 5'-deoxyribose phosphate at abasic sites, but does not have any lyase activity, preventing the release of the 5'-deoxyribose phosphate (5'-dRP) residue. This covalent trapping of the enzyme by the 5'-dRP residue inhibits its DNA synthetic activity during base excision repair, thereby avoiding high incidence of mutagenesis. Targets POLI to replication foci (By similarity).</p> <p>[UniProtKB/Swiss-Prot Function]</p>