

Rabbit POLH Polyclonal Antibody | anti-POLH antibody

POLH Antibody

CATALOG # AAA326411	HOST Rabbit	REACTIVITY Human, Mouse, Rat	APPLICATIONS ELISA, Immunohistochemistry, Western Blot
-------------------------------	-----------------------	--	--

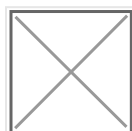
PRODUCT SYNONYMS

POLH; Polyclonal Antibody; POLH Antibody; DNA polymerase eta; FLJ16395; FLJ21978; Polh; POLH_HUMAN; polymerase DNA directed eta; RAD30; RAD30 homolog A; RAD30A; Xeroderma pigmentosum variant type protein; XP V; XPV; anti-POLH antibody

PRODUCT SPECIFICATIONS

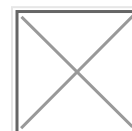
Host	Rabbit
Reactivity	Human, Mouse, Rat
Clonality	Polyclonal
Isotype	IgG
Specificity	POLH antibody detects endogenous levels of total POLH
Purity/Purification	The antiserum was purified by peptide affinity chromatography using SulfoLink Coupling Resin.
Form/Format	Liquid Phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Concentration	1mg/ml (varies by lot)
Sequence Length	414
Applicable Applications for anti-POLH antibody	ELISA, IHC (Immunohistochemistry), WB (Western Blot)
Immunogen	A synthesized peptide derived from human POLH
Subcellular Location	Nucleus. Accumulates at replication forks after DNA damage.
Predicted Cross Reactivity	Sheep
Similarity	Sheep (88%)
Conjugation	Unconjugated
Preparation and Storage	Store at -20 degree C. Stable for 12 months from date of receipt.

IMAGES



IHC (Immunohistochemistry)

AAA326411 at 1/100 staining Mouse kidney tissue by IHC-P. The sample was formaldehyde fixed and a heat mediated antigen retrieval step in citrate buffer was performed. The sample was then blocked and incubated with the antibody for 1.5 hours at 22 degree C. An HRP conjugated goat anti-rabbit antibody was used as the secondary.



WB (Western Blot)

Western blot analysis of extracts of A431, using POLH antibody. The lane on the left is treated with the antigen-specific peptide.

ADDITIONAL INFORMATION

Related Product Information for anti-POLH antibody	Description: This gene encodes a member of the Y family of specialized DNA polymerases. It copies undamaged DNA with a lower fidelity than other DNA-directed polymerases. However, it accurately replicates UV-damaged DNA; when thymine dimers are present, this polymerase inserts the complementary nucleotides in the newly synthesized DNA, thereby bypassing the lesion and suppressing the mutagenic effect of UV-induced DNA damage. This polymerase is thought to be involved in hypermutation during immunoglobulin class switch recombination. Mutations in this gene result in XPV, a variant type of xeroderma pigmentosum. [provided by RefSeq, Jul 2008] Function: DNA polymerase specifically involved in the DNA repair by translesion synthesis (TLS) (PubMed:10385124, PubMed:11743006, PubMed:24449906). 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 (PubMed:24449906). Particularly important for the repair of UV-induced pyrimidine dimers (PubMed:10385124, PubMed:11743006). Although inserts the correct base, may cause base transitions and transversions depending upon the context. May play a role in hypermutation at immunoglobulin genes (PubMed:11376341, PubMed:14734526). 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 (PubMed:14630940). Targets POLI to replication foci (PubMed:12606586). Subunit Structure: Interacts with REV1 (By similarity). Interacts with monoubiquitinated PCNA, but not unmodified PCNA (PubMed:15149598). Interacts with POLI; this interaction targets POLI to the replication machinery (PubMed:12606586). Interacts with PALB2 and BRCA2; the interactions are direct and are required to sustain the recruitment of POLH at blocked replication forks and to stimulate POLH-dependent DNA synthesis on D loop substrates (PubMed:24485656). Post-translational Modifications: Monoubiquitinated by RCHY1/PIRH2; ubiquitination inhibits the ability of PolH to interact with PCNA and to bypass UV-induced lesions. Similarity: The catalytic core consists of fingers, palm and thumb subdomains, but the fingers and thumb subdomains are much smaller than in high-fidelity polymerases; residues from five sequence motifs of the Y-family cluster around an active site cleft that can accommodate DNA and nucleotide substrates with relaxed geometric constraints, with consequently higher rates of misincorporation and low processivity. Belongs to the DNA polymerase type-Y family.
--	--

NCBI AND UNIPROT INFORMATION

NCBI GI #	634743306
NCBI GeneID	5429
NCBI Accession #	NP_001278899.1
NCBI GenBank Nucleotide #	NM_001291970.1
UniProt Accession #	Q9Y253; Q7L8E3; Q96BC4; Q9BX13
Molecular Weight	Observed: 78 kDa Predicted: 79 kDa
NCBI Official Full Name	DNA polymerase eta isoform 3
NCBI Official Synonym Full Names	DNA polymerase eta
NCBI Official Symbol	POLH
NCBI Official Synonym Symbols	XPV; XP-V; RAD30; RAD30A
NCBI Protein Information	DNA polymerase eta
UniProt Protein Name	DNA polymerase eta
UniProt Gene Name	POLH
UniProt Synonym Gene Names	RAD30; RAD30A; XPV

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

AAA Biotech | Tel: +1 (619) 604-9440 | Fax: +1 (619) 604-9441 | contact@aaabiotech.com

Online datasheet: <https://stage.aaabiotech.com/polyclonal/polh-antibody-immunohistochemistry-western-blot-elisa/326411>