10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

Anti-POLH Picoband Antibody
Catalog # ABO12499

Specification

Anti-POLH Picoband Antibody - Product Information

Application	**WB**
Primary Accession	Q9Y253
Host	**Rabbit**
Reactivity	**Human, Rat**
Clonality	**Polyclonal**
Format	**Lyophilized**

Description
Rabbit IgG polyclonal antibody for DNA polymerase eta(POLH) detection. Tested with WB in Human;Rat.

Reconstitution
Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

Anti-POLH Picoband Antibody - Additional Information

Gene ID 5429

Other Names
DNA polymerase eta, 2.7.7.7, RAD30 homolog A, Xeroderma pigmentosum variant type protein, POLH, RAD30, RAD30A, XPV

Calculated MW
78413 MW KDa

Application Details
Western blot, 0.1-0.5 µg/ml, Human, Rat

Subcellular Localization
Nucleus . Accumulates at replication forks after DNA damage.

Protein Name
DNA polymerase eta

Contents
Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na2HPO4, 0.05mg NaN3.

Immunogen
E.coli-derived human POLH recombinant protein (Position: A157-R361). Human POLH shares 93.6% amino acid (aa) sequence identity with mouse POLH.

Purification
Immunogen affinity purified.

Cross Reactivity

No cross reactivity with other proteins.

Storage	**At -20˚C for one year. After r˚Constitution, at 4˚C for one month. It˚Can also be aliquotted and stored frozen at -20˚C for a longer time.Avoid repeated freezing and thawing.**

Anti-POLH Picoband Antibody - Protein Information

Name POLH

Synonyms RAD30, RAD30A, XPV

Function
DNA polymerase specifically involved in the DNA repair by translesion synthesis (TLS) (PubMed:10385124, PubMed:11743006, PubMed:16357261, PubMed:24449906, PubMed:24553286, PubMed:38212351). 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).

Cellular Location
Nucleus. Note=Binding to ubiquitinated PCNA mediates colocalization to replication foci during DNA replication and persists at sites of stalled replication forks following UV irradiation (PubMed:12606586, PubMed:16357261, PubMed:24553286). After UV irradiation, recruited to DNA damage sites within 1 hour, to a maximum of about 80%; this recruitment may not be not restricted to cells active in DNA replication (PubMed:22801543). Colocalizes with TRAIP to nuclear foci (PubMed:24553286).

Anti-POLH Picoband Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

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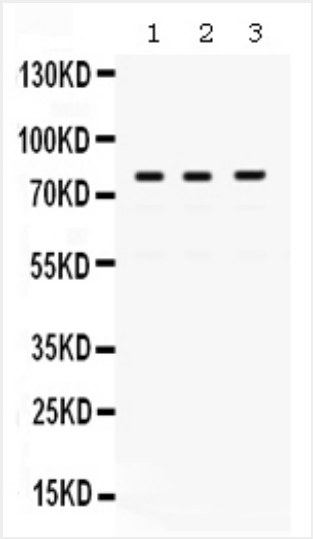
- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

Anti-POLH Picoband Antibody - Images



Anti- POLH Picoband antibody, ABO12499, Western blottingAll lanes: Anti POLH (ABO12499) at 0.5ug/mlLane 1: Rat Liver Tissue Lysate at 50ugLane 2: HELA Whole Cell Lysate at 40ugLane 3: SW620 Whole Cell Lysate at 40ugPredicted bind size: 78KDObserved bind size: 78KD

Anti-POLH Picoband Antibody - Background

DNA polymerase eta (Pol Î·), is a protein that in humans is encoded by the POLH gene. 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. Several transcript variants encoding different isoforms have been found for this gene.