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HEL308 Antibody (Center)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP5124c

Product Information

Application	WB, IHC-P, FC, E
Primary Accession	Q8TDG4
Reactivity	Human, Mouse
Predicted	Rat, Bovine, Canine, Rabbit, Chicken
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB26217
Calculated MW	124131
Antigen Region	399-428

Additional Information

Gene ID	113510
Other Names	Helicase POLQ-like, Mus308-like helicase, POLQ-like helicase, HELQ, HEL308
Target/Specificity	This HEL308 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 399-428 amino acids from the Central region of human HEL308.
Dilution	WB~~1:1000 IHC-P~~1:100~500 FC~~1:10~50 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	HEL308 Antibody (Center) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	HELQ {ECO:0000303|PubMed:24005041, ECO:0000312|HGNC:HGNC:18536}
Function	Single-stranded 3'-5' DNA helicase that plays a key role in homology-driven double-strand break (DSB) repair (PubMed:11751861, PubMed:19995904, PubMed:21398521, PubMed:24005041, PubMed:24005565,

PubMed:34316696, PubMed:34937945). Involved in different DSB repair mechanisms that are guided by annealing of extensive stretches of complementary bases at break ends, such as microhomology-mediated end-joining (MMEJ), single-strand annealing (SSA) or synthesis-dependent strand annealing (SDSA) (PubMed:34937945). Possesses both DNA unwinding and annealing activities (PubMed:34937945). Forms a complex with RAD51, stimulating HELQ DNA helicase activity and ability to unwing DNA (PubMed:34937945). Efficiently unwinds substrates containing 3' overhangs or a D-loop (PubMed:21398521, PubMed:34937945). In contrast, interaction with the replication protein A (RPA/RP-A) complex inhibits DNA unwinding by HELQ but strongly stimulates DNA strand annealing (PubMed:34937945). Triggers displacement of RPA from single-stranded DNA to facilitate annealing of complementary sequences (PubMed:34316696, PubMed:34937945).

Cellular Location

Nucleus. Chromosome Note=Localizes to sites of DNA damage; localizes to damaged replication forks.

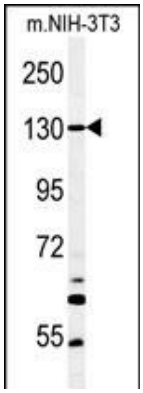
Background

HEL308 is a single-stranded DNA-dependent ATPase and DNA helicase.

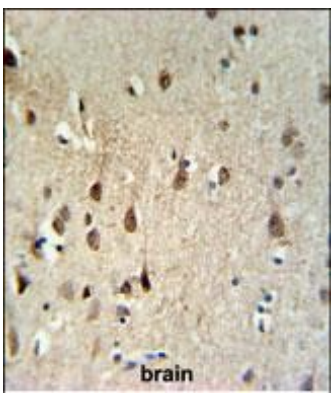
References

Bethke, L., et al. J. Natl. Cancer Inst. 100(4):270-276(2008)
Marini, F., et al. J. Biol. Chem. 278(34):32014-32019(2003)

Images

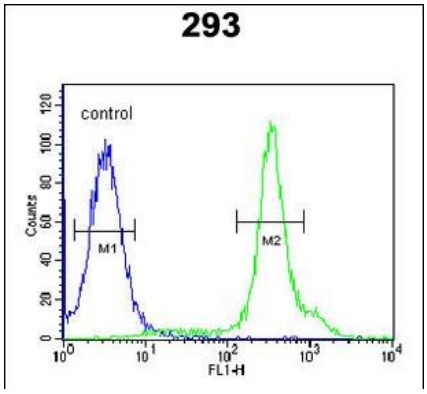


Western blot analysis of HEL308 Antibody (Center) (Cat. #AP5124c) in mouse NIH-3T3 tissue lysates (35ug/lane).HEL308 (arrow) was detected using the purified Pab.



HEL308 Antibody (Center) (Cat. #AP5124c) IHC analysis in formalin fixed and paraffin embedded human brain tissue followed by peroxidase conjugation of the secondary antibody and DAB staining. This data demonstrates the use of the HEL308 Antibody (Center) for immunohistochemistry. Clinical relevance has not been evaluated.

HEL308 Antibody (Center) (Cat. #AP5124c) flow cytometric analysis of 293 cells (right histogram) compared to a negative control cell (left



histogram).FITC-conjugated goat-anti-rabbit secondary antibodies were used for the analysis.

Citations

- Helicase POLQ-like (HELQ) as a novel indicator of platinum-based chemoresistance for epithelial ovarian cancer.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.