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APLF Antibody - C-terminal region

Rabbit Polyclonal Antibody
Catalog # AI15209

Product Information

Application	WB
Primary Accession	Q8IW19
Other Accession	NM_173545, NP_775816
Reactivity	Human, Mouse, Rat, Rabbit, Pig, Horse, Bovine
Predicted	Human, Mouse, Rat, Rabbit, Pig, Horse, Bovine
Host	Rabbit
Clonality	Polyclonal
Calculated MW	56956

Additional Information

Gene ID	200558
Alias Symbol	APFL, C2orf13, FLJ16593, MGC47799, PALF, Xip1
Other Names	Aprataxin and PNK-like factor, 4.2.99.18, Apurinic-apyrimidinic endonuclease APLF, PNK and APTX-like FHA domain-containing protein, XRCC1-interacting protein 1, APLF, C2orf13, PALF, XIP1
Format	Liquid. Purified antibody supplied in 1x PBS buffer with 0.09% (w/v) sodium azide and 2% sucrose.
Reconstitution & Storage	Add 50 ul of distilled water. Final anti-APLF antibody concentration is 1 mg/ml in PBS buffer with 2% sucrose. For longer periods of storage, store at 20°C. Avoid repeat freeze-thaw cycles.
Precautions	APLF Antibody - C-terminal region is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	APLF {ECO:0000303|PubMed:17353262, ECO:0000312|HGNC:HGNC:28724}
Function	Histone chaperone involved in single-strand and double-strand DNA break repair (PubMed:17353262, PubMed:17396150, PubMed:21211721, PubMed:21211722, PubMed:29905837, PubMed:30104678). Recruited to sites of DNA damage through interaction with branched poly-ADP-ribose chains, a polymeric post-translational modification synthesized transiently at sites of chromosomal damage to accelerate DNA strand break repair reactions (PubMed:17353262, PubMed:17396150, PubMed:21211721, PubMed:30104678). Following recruitment to DNA damage sites, acts as a histone chaperone that mediates histone eviction during DNA repair and

promotes recruitment of histone variant MACROH2A1 (PubMed:21211722, PubMed:29905837, PubMed:30104678). Also has a nuclease activity: displays apurinic-apyrimidinic (AP) endonuclease and 3'-5' exonuclease activities in vitro (PubMed:17353262, PubMed:17396150). Also able to introduce nicks at hydroxyuracil and other types of pyrimidine base damage (PubMed:17353262, PubMed:17396150). Together with PARP3, promotes the retention of the LIG4-XRCC4 complex on chromatin and accelerate DNA ligation during non-homologous end-joining (NHEJ) (PubMed:21211721, PubMed:23689425). Also acts as a negative regulator of cell pluripotency by promoting histone exchange (By similarity). Required for the embryo implantation during the epithelial to mesenchymal transition in females (By similarity).

Cellular Location

Nucleus. Chromosome. Cytoplasm, cytosol. Note=Localizes to DNA damage sites (PubMed:18172500, PubMed:18474613, PubMed:21211721, PubMed:21211722, PubMed:23689425). Accumulates at single-strand breaks and double-strand breaks via the PBZ-type zinc fingers (PubMed:18172500)

References

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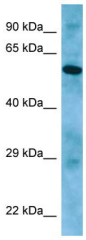
Hillier L.W.,et al.Nature 434:724-731(2005).
Kanno S.,et al.EMBO J. 26:2094-2103(2007).
Bekker-Jensen S.,et al.J. Biol. Chem. 282:19638-19643(2007).
Iles N.,et al.Mol. Cell. Biol. 27:3793-3803(2007).

Images



WB Suggested Anti-APLF Antibody Titration: 1.0 µg/ml
Positive Control: PANC1 Whole Cell