

Artemis (pS516) Antibody
Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP51158**Specification**

Artemis (pS516) Antibody - Product Information

Application	WB
Primary Accession	O96SD1
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Calculated MW	78 KDa

Artemis (pS516) Antibody - Additional Information**Gene ID** 64421**Other Names**

Protein artemis, 31--, DNA cross-link repair 1C protein, Protein A-SCID, SNM1 homolog C, hSNM1C, SNM1-like protein, DCLRE1C, ARTEMIS, ASCID, SCIDA, SNM1C

Dilution

WB~~ 1:1000

Format

0.01M PBS, pH 7.2, 0.09% (W/V) Sodium azide, Glycerol 50%

Storage

Store at -20 °C. Stable for 12 months from date of receipt

Artemis (pS516) Antibody - Protein Information**Name** DCLRE1C ([HGNC:17642](#))**Function**

Nuclease involved in DNA non-homologous end joining (NHEJ); required for double-strand break repair and V(D)J recombination (PubMed: [11336668](http://www.uniprot.org/citations/11336668), PubMed: [11955432](http://www.uniprot.org/citations/11955432), PubMed: [12055248](http://www.uniprot.org/citations/12055248), PubMed: [14744996](http://www.uniprot.org/citations/14744996), PubMed: [15071507](http://www.uniprot.org/citations/15071507), PubMed: [15574326](http://www.uniprot.org/citations/15574326), PubMed: [15936993](http://www.uniprot.org/citations/15936993)). Required for V(D)J recombination, the process by which exons encoding the antigen-binding domains of immunoglobulins and T-cell receptor proteins are assembled from individual V, (D), and J gene segments (PubMed: [11336668](http://www.uniprot.org/citations/11336668), PubMed: [11955432](http://www.uniprot.org/citations/11955432), PubMed: [12055248](http://www.uniprot.org/citations/12055248), PubMed: [14744996](http://www.uniprot.org/citations/14744996), PubMed: [15071507](http://www.uniprot.org/citations/15071507), PubMed: [15574326](http://www.uniprot.org/citations/15574326), PubMed: [15936993](http://www.uniprot.org/citations/15936993)).

href="http://www.uniprot.org/citations/14744996" target="_blank">14744996). V(D)J recombination is initiated by the lymphoid specific RAG endonuclease complex, which generates site specific DNA double strand breaks (DSBs) (PubMed:11336668, PubMed:11955432, PubMed:14744996). These DSBs present two types of DNA end structures: hairpin sealed coding ends and phosphorylated blunt signal ends (PubMed:11336668, PubMed:11955432, PubMed:14744996). These ends are independently repaired by the non homologous end joining (NHEJ) pathway to form coding and signal joints respectively (PubMed:11336668, PubMed:11955432, PubMed:14744996). This protein exhibits single-strand specific 5'-3' exonuclease activity in isolation and acquires endonucleolytic activity on 5' and 3' hairpins and overhangs when in a complex with PRKDC (PubMed:11955432, PubMed:15071507, PubMed:15574326, PubMed:15936993). The latter activity is required specifically for the resolution of closed hairpins prior to the formation of the coding joint (PubMed:11955432). Also required for the repair of complex DSBs induced by ionizing radiation, which require substantial end-processing prior to religation by NHEJ (PubMed:15456891, PubMed:15468306, PubMed:15574327, PubMed:15811628).

Cellular Location

Nucleus

Tissue Location

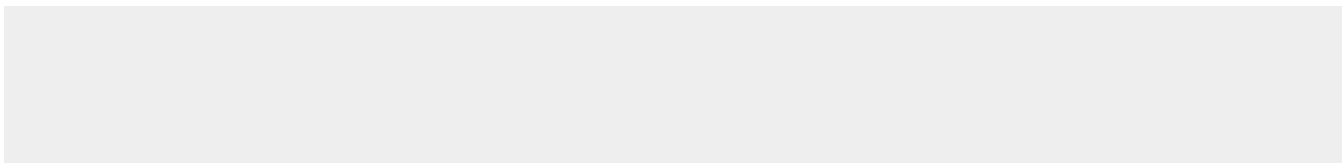
Ubiquitously expressed, with highest levels in the kidney, lung, pancreas and placenta (at the mRNA level). Expression is not increased in thymus or bone marrow, sites of V(D)J recombination

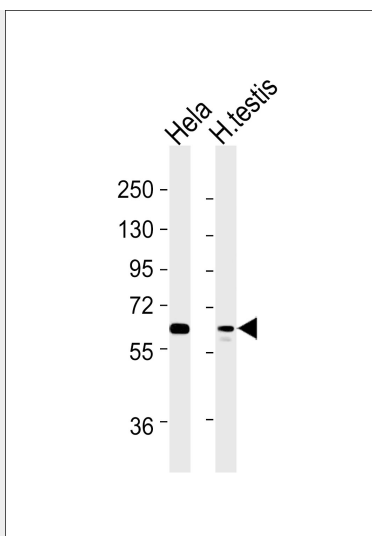
Artemis (pS516) Antibody - Protocols

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

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

Artemis (pS516) Antibody - Images





All lanes : Anti-Artemis (pS516) Antibody at 1:1000 dilution Lane 1: HeLa whole cell lysates Lane 2: H.testis whole cell lysates Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution Predicted band size : 78 kDa Blocking/Dilution buffer: 5% NFDM/TBST.

Artemis (pS516) Antibody - Background

Required for V(D)J recombination, the process by which exons encoding the antigen-binding domains of immunoglobulins and T-cell receptor proteins are assembled from individual V, (D), and J gene segments. V(D)J recombination is initiated by the lymphoid specific RAG endonuclease complex, which generates site specific DNA double strand breaks (DSBs). These DSBs present two types of DNA end structures: hairpin sealed coding ends and phosphorylated blunt signal ends. These ends are independently repaired by the non homologous end joining (NHEJ) pathway to form coding and signal joints respectively. This protein exhibits single-strand specific 5'-3' exonuclease activity in isolation and acquires endonucleolytic activity on 5' and 3' hairpins and overhangs when in a complex with PRKDC. The latter activity is required specifically for the resolution of closed hairpins prior to the formation of the coding joint. May also be required for the repair of complex DSBs induced by ionizing radiation, which require substantial end-processing prior to religation by NHEJ.

Artemis (pS516) Antibody - References

Moshous D.,et al.Cell 105:177-186(2001).
Li L.,et al.J. Immunol. 168:6323-6329(2002).
Ota T.,et al.Nat. Genet. 36:40-45(2004).
Deloukas P.,et al.Nature 429:375-381(2004).
Mural R.J.,et al.Submitted (SEP-2005) to the EMBL/GenBank/DDBJ databases.