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Artemis (DCLREIC) Antibody
Rabbit Polyclonal Antibody
Catalog # ABV10233

Specification

Artemis (DCLREIC) Antibody - Product Information

Application	**WB**
Primary Accession	Q96SD1
Reactivity	**Human, Mouse, Rat**
Host	**Rabbit**
Clonality	**Polyclonal**
Isotype	**Rabbit IgG**
Calculated MW	**78436**

Artemis (DCLREIC) Antibody - Additional Information

Gene ID 64421

Positive Control	**3T3 cell lysate**
Application & Usage	**Western blot: 1:200**

Other Names
DNA cross-link repair 1C protein, SNM1-like protein

Target/Specificity
Artemis

Antibody Form
Liquid

Appearance
Colorless liquid

Formulation
100 µg (0.5 mg/ml) of antibody in PBS, 0.01 % BSA, 0.01 % thimerosal, and 50 % glycerol, pH 7.2

Handling
The antibody solution should be gently mixed before use.

Reconstitution & Storage
-20 °C

Background Descriptions

Precautions
Artemis (DCLREIC) Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Artemis (DCLREIC) 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, PubMed:11955432, PubMed:12055248, PubMed:14744996, PubMed:15071507, PubMed:15574326, PubMed: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, PubMed:11955432, PubMed: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:15071507, PubMed:15574326, PubMed:11955432, 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 (DCLREIC) Antibody - Protocols

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

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

Artemis (DCLREIC) Antibody - Images

Artemis (DCLREIC) Antibody - Background

Artemis is a 78 kDa protein, belonging to metallo-beta-lactamase superfamily. It is involved in endonuclease activity to break DNA hairpins. It also has been reported that the C-terminus of Artemis interacts with DNA binding domain of Ligase IV directly. Ligase IV is a key enzyme in DNA repair and V(D)J recombination. Thus, Artemis is a novel protein that is involved in V(D)J recombination/DNA repair. Mutations cause human T-B-severe combined immunodeficiency associated with increased cellular radiosensitivity (RS-SCID).