

Anti-Artemis antibody



Description	Rabbit polyclonal to Artemis.
Model	STJ91710
Host	Rabbit
Reactivity	Human
Applications	ELISA, IF, IHC
Immunogen	Synthesized peptide derived from human Artemis around the non-phosphorylation site of S516.
Immunogen Region	460-540 aa
Gene ID	64421
Gene Symbol	DCLRE1C
Dilution range	IHC 1:100-1:300IF 1:200-1:1000ELISA 1:10000
Specificity	Artemis Polyclonal Antibody detects endogenous levels of Artemis protein.
Tissue Specificity	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.
Purification	The antibody was affinity-purified from rabbit antiserum by affinity-chromatography using epitope-specific immunogen.
Note	For Research Use Only (RUO).
Protein Name	Protein artemis DNA cross-link repair 1C protein Protein A-SCID SNM1 homolog C hSNM1C SNM1-like protein

Molecular Weight	78 kDa
Clonality	Polyclonal
Conjugation	Unconjugated
Isotype	IgG
Formulation	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide.
Concentration	1 mg/ml
Storage Instruction	Store at -20°C, and avoid repeat freeze-thaw cycles.
Database Links	HGNC:17642OMIM:602450
Alternative Names	Protein artemis DNA cross-link repair 1C protein Protein A-SCID SNM1 homolog C hSNM1C SNM1-like protein
Function	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.
Cellular Localization	Nucleus
Post-translational Modifications	Phosphorylation on undefined residues by PRKDC may stimulate endonucleolytic activity on 5' and 3' hairpins and overhangs. PRKDC must remain present, even after phosphorylation, for efficient hairpin opening. Also phosphorylated by ATM in response to ionizing radiation (IR) and by ATR in response to ultraviolet (UV) radiation.