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DCLRE1C Antibody (N-term) Blocking Peptide

Synthetic peptide
Catalog # BP9737a

Specification

DCLRE1C Antibody (N-term) Blocking Peptide - Product Information

Primary Accession Q96SD1

DCLRE1C Antibody (N-term) Blocking Peptide - 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

Format
Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

Precautions
This product is for research use only. Not for use in diagnostic or therapeutic procedures.

DCLRE1C Antibody (N-term) Blocking Peptide - 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:<a

href="http://www.uniprot.org/citations/11955432" target="_blank">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

DCLRE1C Antibody (N-term) Blocking Peptide - Protocols

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

- Blocking Peptides

DCLRE1C Antibody (N-term) Blocking Peptide - Images

DCLRE1C Antibody (N-term) Blocking Peptide - Background

DCLRE1C is a nuclear protein that is involved in V(D)J recombination and DNA repair. The protein has single-strand-specific 5'-3' exonuclease activity; it also exhibits endonuclease activity on 5' and 3' overhangs and hairpins when complexed with protein kinase, DNA-activated, catalytic polypeptide.

DCLRE1C Antibody (N-term) Blocking Peptide - References

Beucher, A., et al. EMBO J. 28(21):3413-3427(2009)Rivera-Munoz, P., et al. Blood 114(17):3601-3609(2009)Wang, H., et al. J. Biol. Chem. 284(27):18236-18243(2009)