

CD027 Antibody (Center) Blocking Peptide
Synthetic peptide
Catalog # BP9912c**Specification**

CD027 Antibody (Center) Blocking Peptide - Product InformationPrimary Accession [Q9NWX4](#)**CD027 Antibody (Center) Blocking Peptide - Additional Information**

Gene ID 54969

Other Names

UPF0609 protein C4orf27, C4orf27

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.

CD027 Antibody (Center) Blocking Peptide - Protein Information**Name** HPF1 {ECO:0000303|PubMed:27067600, ECO:0000312|HGNC:HGNC:26051}**Function**

Cofactor for serine ADP-ribosylation that confers serine specificity on PARP1 and PARP2 and plays a key role in DNA damage response (PubMed:28190768, PubMed:29480802, PubMed:29954836, PubMed:33186521, PubMed:32028527, PubMed:32939087, PubMed:34486521, PubMed:34874266, PubMed:34210965, PubMed:34625544, PubMed:33589610, PubMed:34732825, PubMed:33683197, PubMed:34795260, PubMed:34108479). Initiates the repair of double-strand DNA breaks: recruited to DNA damage sites by PARP1 and PARP2 and

switches the amino acid specificity of PARP1 and PARP2 from aspartate or glutamate to serine residues, licensing serine ADP-ribosylation of target proteins (PubMed:28190768, PubMed:29480802, PubMed:29954836, PubMed:32028527, PubMed:32939087, PubMed:34486521, PubMed:34874266, PubMed:34625544, PubMed:33589610, PubMed:34732825, PubMed:33683197, PubMed:34795260). Serine ADP-ribosylation of target proteins, such as histones, promotes decompaction of chromatin and the recruitment of repair factors leading to the reparation of DNA strand breaks (PubMed:27067600, PubMed:28190768, PubMed:32939087, PubMed:33589610). Serine ADP-ribosylation of proteins constitutes the primary form of ADP- ribosylation of proteins in response to DNA damage (PubMed:29480802). HPF1 acts by completing the active site of PARP1 and PARP2: forms a composite active site composed of residues from HPF1 and PARP1 or PARP2 (PubMed:32028527, PubMed:33589610). While HPF1 promotes the initiation of serine ADP-ribosylation, it restricts the polymerase activity of PARP1 and PARP2 in order to limit the length of poly-ADP-ribose chains (PubMed:34732825, PubMed:33683197, PubMed:34795260). HPF1 also promotes tyrosine ADP-ribosylation, probably by conferring tyrosine specificity on PARP1 (PubMed:29954836, PubMed:30257210).

Cellular Location

Chromosome. Nucleus Note=Localizes to DNA damage sites; chromatin localization is dependent on PARP1 and PARP2.

CD027 Antibody (Center) Blocking Peptide - Protocols

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

- [Blocking Peptides](#)

CD027 Antibody (Center) Blocking Peptide - Images

CD027 Antibody (Center) Blocking Peptide - References

Simpson, J.C., et al. EMBO Rep. 1(3):287-292(2000)