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ERCC5 Antibody (C-term) Blocking Peptide

Synthetic peptide
Catalog # BP17894b

Specification

ERCC5 Antibody (C-term) Blocking Peptide - Product Information

Primary Accession P28715

ERCC5 Antibody (C-term) Blocking Peptide - Additional Information

Gene ID 2073

Other Names
DNA repair protein complementing XP-G cells, 31--, DNA excision repair protein ERCC-5, Xeroderma pigmentosum group G-complementing protein, ERCC5, ERCM2, XPG, XPGC

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.

ERCC5 Antibody (C-term) Blocking Peptide - Protein Information

Name ERCC5

Synonyms ERCM2, XPG, XPGC

Function
Single-stranded structure-specific DNA endonuclease involved in DNA excision repair (PubMed:8206890, PubMed:8090225, PubMed:8078765, PubMed:7651464, PubMed:32821917, PubMed:32522879). Makes the 3'incision in DNA nucleotide excision repair (NER) (PubMed:8090225, PubMed:8078765, PubMed:32821917, PubMed:32522879). Binds and bends DNA repair bubble substrate and breaks base stacking at the single- strand/double-strand DNA junction of the DNA bubble (PubMed:32522879). Plays a role in base excision repair (BER) by promoting the

binding of DNA glycosylase NTHL1 to its substrate and increasing NTHL1 catalytic activity that removes oxidized pyrimidines from DNA (PubMed:9927729). Involved in transcription-coupled nucleotide excision repair (TCR) which allows RNA polymerase II-blocking lesions to be rapidly removed from the transcribed strand of active genes (PubMed:16246722). Functions during the initial step of TCR in cooperation with ERCC6/CSB to recognized stalled RNA polymerase II (PubMed:16246722). Also, stimulates ERCC6/CSB binding to the DNA repair bubble and ERCC6/CSB ATPase activity (PubMed:16246722). Required for DNA replication fork maintenance and preservation of genomic stability (PubMed:26833090, PubMed:32522879). Involved in homologous recombination repair (HRR) induced by DNA replication stress by recruiting RAD51, BRCA2, and PALB2 to the damaged DNA site (PubMed:26833090). During HRR, binds to the replication fork with high specificity and stabilizes it (PubMed:32522879). Also, acts upstream of HRR, to promote the release of BRCA1 from DNA (PubMed:26833090).

Cellular Location
Nucleus. Chromosome. Note=Colocalizes with RAD51 to nuclear foci in S phase (PubMed:26833090). Localizes to DNA double-strand breaks (DBS) during replication stress (PubMed:26833090). Colocalizes with BRCA2 to nuclear foci following DNA replication stress (PubMed:26833090).

ERCC5 Antibody (C-term) Blocking Peptide - Protocols

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

- Blocking Peptides

ERCC5 Antibody (C-term) Blocking Peptide - Images

ERCC5 Antibody (C-term) Blocking Peptide - Background

Excision repair cross-complementing rodent repairdeficiency, complementation group 5 (xeroderma pigmentosum,complementation group G) is involved in excision repair ofUV-induced DNA damage. Mutations cause Cockayne syndrome, which ischaracterized by severe growth defects, mental retardation, andcachexia. Multiple alternatively spliced transcript variantsencoding distinct isoforms have been described, but the biologicalvalidity of all variants has not been determined. [provided byRefSeq].

ERCC5 Antibody (C-term) Blocking Peptide - References

Figl, A., et al. Mutat. Res. 702(1):8-16(2010)Ho-Pun-Cheung, A., et al. Pharmacogenomics J. (2010) In press :Briggs, F.B., et al. Am. J. Epidemiol. 172(2):217-224(2010)Monsees, G.M., et al. Breast Cancer Res. Treat. (2010) In press :Canbay, E., et al. Anticancer Res. 30(4):1359-1364(2010)