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Anti-CSB Picoband Antibody

Catalog # ABO11678

Product Information

Application	WB
Primary Accession	Q03468
Host	Rabbit
Reactivity	Human, Rat
Clonality	Polyclonal
Format	Lyophilized
Description	Rabbit IgG polyclonal antibody for DNA excision repair protein ERCC-6(ERCC6) detection. Tested with WB in Human;Rat.
Reconstitution	Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

Additional Information

Gene ID	2074
Other Names	DNA excision repair protein ERCC-6, 3.6.4.-, ATP-dependent helicase ERCC6, Cockayne syndrome protein CSB, ERCC6, CSB
Calculated MW	168416
Application Details	Western blot, 0.1-0.5 □g/ml, Human, Rat
Subcellular Localization	Nucleus .
Source	Eukaryota
Protein Name	DNA excision repair protein ERCC-6
Contents	Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na2HPO4, 0.05mg NaN3.
Immunogen	A synthetic peptide corresponding to a sequence at the N-terminus of human CSB (160-205aa QAATSRDINRKLDSVKRQKYNKEQQLKKITAKQKHLQAILGGAEVK).
Purification	Immunogen affinity purified.
Cross Reactivity	No cross reactivity with other proteins.
Storage	At -20˚C for one year. After r˚Constitution, at 4˚C for one month. It˚Can also be aliquotted and stored frozen at -20˚C for a longer time.Avoid repeated freezing and thawing.

Protein Information

Name	ERCC6 {ECO:0000303|PubMed:1339317, ECO:0000312|HGNC:HGNC:3438}
Function	Essential factor involved in transcription-coupled nucleotide excision repair (TC-NER), a process during which RNA polymerase II- blocking lesions are rapidly removed from the transcribed strand of active genes (PubMed:16246722, PubMed:20541997, PubMed:22483866, PubMed:26620705, PubMed:32355176, PubMed:34526721, PubMed:38316879, PubMed:38600235, PubMed:38600236). Plays a central role in the initiation of the TC-NER process: specifically recognizes and binds RNA polymerase II stalled at a lesion, and mediates recruitment of ERCC8/CSA, initiating DNA damage excision by TFIIH recruitment (PubMed:32355176, PubMed:34526721, PubMed:38600235, PubMed:38600236). Upon DNA-binding, it locally modifies DNA conformation by wrapping the DNA around itself, thereby modifying the interface between stalled RNA polymerase II and DNA (PubMed:15548521). Acts as a chromatin remodeler at DSBs; DNA-dependent ATPase-dependent activity is essential for this function (PubMed:16246722, PubMed:9565609). Plays an important role in regulating the choice of the DNA double-strand breaks (DSBs) repair pathway and G2/M checkpoint activation; DNA-dependent ATPase activity is essential for this function (PubMed:25820262). Regulates the DNA repair pathway choice by inhibiting non-homologous end joining (NHEJ), thereby promoting the homologous recombination (HR)-mediated repair of DSBs during the S/G2 phases of the cell cycle (PubMed:25820262). Mediates the activation of the ATM- and CHEK2-dependent DNA damage responses thus preventing premature entry of cells into mitosis following the induction of DNA DSBs (PubMed:25820262). Remodels chromatin by evicting histones from chromatin flanking DSBs, limiting RIF1 accumulation at DSBs thereby promoting BRCA1-mediated HR (PubMed:29203878). Required for stable recruitment of ELOA and CUL5 to DNA damage sites (PubMed:28292928). Also involved in UV-induced translocation of ERCC8 to the nuclear matrix (PubMed:26620705). Essential for neuronal differentiation and neuritogenesis; regulates transcription and chromatin remodeling activities required during neurogenesis (PubMed:24874740).
Cellular Location	Nucleus. Chromosome Note=Recognizes and binds RNA polymerase II stalled at DNA damage sites.

Background

DNA excision repair protein ERCC-6 (also CS-B protein) is a protein that in humans is encoded by the ERCC6 gene. This gene encodes a DNA-binding protein that is important in transcription-coupled excision repair. The encoded protein has ATP-stimulated ATPase activity, interacts with several transcription and excision repair proteins, and may promote complex formation at DNA repair sites. Mutations in this gene are associated with Cockayne syndrome type B and cerebrooculofacioskeletal syndrome 1. Alternative splicing occurs between a splice site from exon 5 of this gene to the 3' splice site upstream of the open reading frame (ORF) of the adjacent gene, piggyback-derived-3, which activates the alternative polyadenylation site downstream of the piggyback-derived-3 ORF. The resulting transcripts encode a fusion protein that shares sequence with the product of each individual gene.

Images

Western blot analysis of CSB expression in rat liver extract (lane 1) and COLO320 whole cell lysates (lane 2). CSB at 168KD was detected using rabbit anti- CSB Antigen Affinity purified polyclonal antibody (Catalog # ABO11678) at 0.5 ??g/mL. The blot was developed using chemiluminescence (ECL) method .



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