

# CSA (C-18): sc-10998

## BACKGROUND

Nucleotide excision repair of DNA lesions occurs more rapidly and at a higher frequency on the template, or transcribed, strand of DNA and to a much lesser extent on the coding, or non-transcribed, strand or on transcriptionally inactive DNA. CSA and CSB are two related genes that are responsible for directing this preferential DNA repair pattern, known as transcriptional-repair coupling. Cells from patients with the UV-sensitive nucleotide excision repair disorder Cockayne's syndrome (CS) have specific mutations affecting these genes, which result in defects of the preferential repair on the transcribed strand of activated genes. CSA is a protein that belongs in the "WD-repeat" family of proteins. CSB, which is also designated excision repair cross-complementing protein-6 (ERCC6) is the homolog of the yeast Rad26 protein. CSB belongs in the SWI/SNF family of proteins as it contains helicase motifs and ATPase activity.

## REFERENCES

1. Troelstra, C., et al. 1992. ERCC6, a member of a subfamily of putative helicases, is involved in Cockayne's syndrome and preferential repair of active genes. *Cell* 71: 939-953.
2. Troelstra, C., et al. 1993. Structure and expression of the excision repair gene ERCC6, involved in the human disorder Cockayne's syndrome group B. *Nucleic Acids Res.* 21: 419-426.
3. Henning, K.A., et al. 1995. The Cockayne syndrome group A gene encodes a WD repeat protein that interacts with CSB protein and a subunit of RNA polymerase II TFIIH. *Cell* 82: 555-564.
4. Iyer, N., et al. 1996. Interactions involving the human RNA polymerase II transcription/nucleotide excision repair complex TFIIH, the nucleotide excision repair protein XPG, and Cockayne syndrome group B (CSB) protein. *Biochemistry* 35: 2157-2167.

## CHROMOSOMAL LOCATION

Genetic locus: ERCC8 (human) mapping to 5q12.1; Ercc8 (mouse) mapping to 13 D2.1.

## SOURCE

CSA (C-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of CSA of human origin.

## PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-10998 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## STORAGE

Store at 4° C, **\*\*DO NOT FREEZE\*\***. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## APPLICATIONS

CSA (C-18) is recommended for detection of CSA of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

CSA (C-18) is also recommended for detection of CSA in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for CSA siRNA (h): sc-37792, CSA siRNA (m): sc-37793, CSA shRNA Plasmid (h): sc-37792-SH, CSA shRNA Plasmid (m): sc-37793-SH, CSA shRNA (h) Lentiviral Particles: sc-37792-V and CSA shRNA (m) Lentiviral Particles: sc-37793-V.

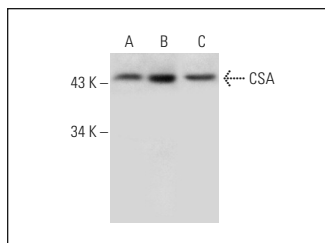
Molecular Weight of CSA: 44 kDa.

Positive Controls: Jurkat nuclear extract: sc-2132, Hep G2 nuclear extract: sc-364819 or MOLT-4 nuclear extract: sc-2151.

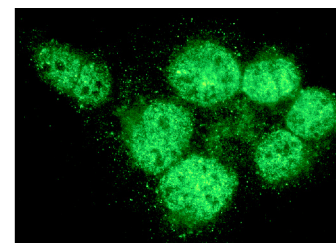
## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## DATA



CSA (C-18): sc-10998. Western blot analysis of CSA expression in Jurkat (A), Hep G2 (B) and MOLT-4 (C) nuclear extracts.



CSA (C-18): sc-10998. Immunofluorescence staining of methanol-fixed JAR cells showing nuclear localization.

## RESEARCH USE

For research use only, not for use in diagnostic procedures.

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Try **CSA (D-2): sc-376981** or **CSA (235C3a): sc-81560**, our highly recommended monoclonal alternatives to CSA (C-18).