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RFC1 (m): 293T Lysate: sc-123083

BACKGROUND

Replication factor C (RFC) is an essential DNA polymerase accessory protein that is required for numerous aspects of DNA metabolism, including DNA replication, DNA repair and telomere metabolism. RFC is a heteropentameric complex that recognizes a primer on a template DNA, binds to a primer terminus and loads proliferating cell nuclear antigen (PCNA) onto DNA at primer-template junctions in an ATP-dependent reaction. All five of the RFC subunits share a set of related sequences (RFC boxes) that include nucleotide-binding consensus sequences. Four of the five RFC genes (including RFC1, RFC2, RFC3 and RFC4) have consensus ATP-binding motifs. The small RFC proteins, RFC2, RFC3, RFC4 and RFC5, interact with Rad24, whereas the RFC1 subunit does not. RFC1 is a substrate for caspase-3 *in vitro* and is cleaved by a caspase-3-like protease during Fas-mediated apoptosis. In addition, phosphorylation of the PCNA binding domain of RFC1 by Ca²⁺/calmodulin-dependent protein kinase II (CaMKII) inhibits DNA synthesis. The human RFC1 gene maps to chromosome 4p14 and encodes the RFC1 subunit.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: *Rfc1* (mouse) mapping to 5 C3.1.

PRODUCT

RFC1 (m): 293T Lysate represents a lysate of mouse RFC1 transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

RESEARCH USE

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

APPLICATIONS

RFC1 (m): 293T Lysate is suitable as a Western Blotting positive control for mouse reactive RFC1 antibodies. Recommended use: 10-20 µl per lane.

Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.