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Produktinformation

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Lieferung & Zahlungsart

siehe unsere Liefer- und Versandbedingungen

Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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SANTA CRUZ BIOTECHNOLOGY, INC.

XLF (m): 293T Lysate: sc-124664

BACKGROUND

XLF (XRCC4-like factor), also known as non-homologous end-joining factor 1 (NHEJ1) or Cernunnos, is a 295 amino acid protein belonging to the XLF family. There are two main repair pathways for DNA double-strand breaks: homologous recombination (HR) and non-homologous end-joining (NHEJ). In the latter pathway, the Ku-70/Ku-86 heterodimer binds the DNA ends together and the DNA-PK catalytic subunits are recruited. Then the DNA ends are processed by DNA processing enzymes, such as Artemis. The binding is finalized through DNA Ligase IV, which acts in a complex with XRCC4 and XLF to stabilize the repair. Thus, it is believed that XLF interacts with DNA Ligase IV and XRCC4 to constitute the enzymatic core of the NHEJ machinery. Two named isoforms of XLF exist as a result of alternative splicing events.

REFERENCES

1. Revy, P., et al. 2006. Cernunnos-XLF, a recently identified non-homologous end-joining factor required for the development of the immune system. Curr. Opin. Allergy Clin. Immunol. 6: 416-420.
2. Drouet, J., et al. 2006. Interplay between Ku, Artemis, and the DNA-dependent protein kinase catalytic subunit at DNA ends. J. Biol. Chem. 281: 27784-27793.
3. Hentges, P., et al. 2006. Evolutionary and functional conservation of the DNA non-homologous end-joining protein, XLF/Cernunnos. J. Biol. Chem. 281: 37517-37526.
4. Windhofer, F., et al. 2007. Low levels of DNA ligases III and IV sufficient for effective NHEJ. J. Cell. Physiol. 213: 475-483.
5. Zha, S., et al. 2007. Defective DNA repair and increased genomic instability in Cernunnos-XLF-deficient murine ES cells. Proc. Natl. Acad. Sci. USA 104: 4518-4523.
6. Tsai, C.J., et al. 2007. Cernunnos/XLF promotes the ligation of mismatched and noncohesive DNA ends. Proc. Natl. Acad. Sci. USA 104: 7851-7856.
7. Mahaney, B.L., et al. 2009. Repair of ionizing radiation-induced DNA double-strand breaks by non-homologous end-joining. Biochem. J. 417: 639-650.
8. Malivert, L., et al. 2009. The C-terminal domain of Cernunnos/XLF is dispensable for DNA repair *in vivo*. Mol. Cell. Biol. 29: 1116-1122.
9. Schwartz, M., et al. 2009. Impaired replication stress response in cells from immunodeficiency patients carrying Cernunnos/XLF mutations. PLoS ONE 4: e4516.

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.

CHROMOSOMAL LOCATION

Genetic locus: Nhej1 (mouse) mapping to 1 C3.

PRODUCT

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

APPLICATIONS

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

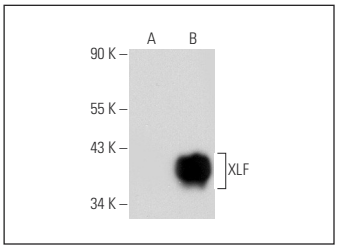
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

XLF (D-1): sc-166488 is recommended as a positive control antibody for Western Blot analysis of enhanced mouse XLF expression in XLF transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048.

DATA



XLF (D-1): sc-166488. Western blot analysis of XLF expression in non-transfected: sc-117752 (**A**) and mouse XLF transfected: sc-124664 (**B**) 293T whole cell lysates.

RESEARCH USE

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