



HJURP (M-300): sc-134697

BACKGROUND

HJURP (holliday junction recognition protein), also known as FAKTS, URLC9 or hFLEG1, is a 748 amino acid protein that is expressed in thymus, placenta, small intestine, liver, skeletal muscle, bone marrow and colon. When Histone H3-like variant CENP-A nucleosomes are assembled, HJURP localizes in centromeres during late telophase and early G₁ phase, and localizes to the nucleolus during S phase. Considered a centromeric protein, HJURP plays a central role in the incorporation and maintenance of CENP-A at centromeres. HJURP also acts as a specific chaperone for CENP-A and is required for the incorporation of newly synthesized CENP-A molecules into nucleosomes at replicated centromeres. HJURP is considered an indispensable factor for chromosomal stability in immortalized cancer cells and is a potential novel therapeutic target for the development of anticancer drugs.

REFERENCES

1. Foltz, D.R., Jansen, L.E., Black, B.E., Bailey, A.O., Yates, J.R. and Cleveland, D.W. 2006. The human CENP-A centromeric nucleosome-associated complex. *Nat. Cell Biol.* 8: 458-469.
2. Kato, T., Sato, N., Hayama, S., Yamabuki, T., Ito, T., Miyamoto, M., Kondo, S., Nakamura, Y. and Daigo, Y. 2007. Activation of Holliday junction recognizing protein involved in the chromosomal stability and immortality of cancer cells. *Cancer Res.* 67: 8544-8553.
3. Black, B.E., Jansen, L.E., Maddox, P.S., Foltz, D.R., Desai, A.B., Shah, J.V. and Cleveland, D.W. 2007. Centromere identity maintained by nucleosomes assembled with Histone H3 containing the CENP-A targeting domain. *Mol. Cell.* 25: 309-322.
4. Black, B.E. and Bassett, E.A. 2008. The histone variant CENP-A and centromere specification. *Curr. Opin. Cell Biol.* 20: 91-100.
5. Foltz, D.R., Jansen, L.E., Bailey, A.O., Yates, J.R., Bassett, E.A., Wood, S., Black, B.E. and Cleveland, D.W. 2009. Centromere-specific assembly of CENP-a nucleosomes is mediated by HJURP. *Cell* 137: 472-484.
6. Dunleavy, E.M., Roche, D., Tagami, H., Lacoste, N., Ray-Gallet, D., Nakamura, Y., Daigo, Y., Nakatani, Y. and Almouzni-Pettinotti, G. 2009. HJURP is a cell-cycle-dependent maintenance and deposition factor of CENP-A at centromeres. *Cell* 137: 485-497.
7. Sanchez-Pulido, L., Pidoux, A.L., Ponting, C.P. and Allshire, R.C. 2009. Common ancestry of the CENP-A chaperones Scm3 and HJURP. *Cell* 137: 1173-1174.
8. Bernad, R., Sánchez, P. and Losada, A. 2009. Epigenetic specification of centromeres by CENP-A. *Exp. Cell Res.* 315: 3233-3241.
9. Shuaib, M., Ouararhni, K., Dimitrov, S. and Hamiche, A. 2010. HJURP binds CENP-A via a highly conserved N-terminal domain and mediates its deposition at centromeres. *Proc. Natl. Acad. Sci. USA* 107: 1349-1354.

STORAGE

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

SOURCE

HJURP (M-300) is a rabbit polyclonal antibody raised against amino acids 281-580 mapping within an internal region of HJURP of mouse origin.

PRODUCT

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

APPLICATIONS

HJURP (M-300) is recommended for detection of HJURP of mouse 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).

Molecular Weight of HJURP: 83 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

RESEARCH USE

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

PROTOCOLS

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