

HCNP (h2): 293T Lysate: sc-170495

BACKGROUND

HCNP, also known as XAB2 (xeroderma pigmentosum group A (XPA) binding protein 2), HCRN, SYF1 or NTC90, is a nuclear protein that participates in transcription, transcription-coupled repair (TCR) and pre-mRNA splicing. It contains fifteen tetratricopeptide repeat motifs and associates with nucleotide excision repair machinery. More specifically, HCNP associates with Cockayne syndrome group A and B proteins (CSA and CSB), RNA Polymerase II (Pol II) and XPA in response to DNA damage and is believed to function in the TCR pathway. HCNP also functions as an essential component of a pre-mRNA splicing complex of the spliceosome (composed of AQR (aquarius), PRP19, CCDC16, HCNP, ISY1 and cyclophilin E) and is required for proper RNA synthesis in the cell. In addition, HCNP functions as a component of the RAR corepressor complex with RAR α and HDAC3 and exhibits an inhibitory effect on ATRA-induced cell differentiation. This suggests that HCNP may function as useful target in cancer therapy.

REFERENCES

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2. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 610850. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
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4. Yonemasu, R., et al. 2005. Disruption of mouse XAB2 gene involved in pre-mRNA splicing, transcription and transcription-coupled DNA repair results in preimplantation lethality. *DNA Repair* 4: 479-491.
5. Nabeshi, H., et al. 2006. Proteomic analysis for protein carbonyl as an indicator of oxidative damage in senescence-accelerated mice. *Free Radic. Res.* 40: 1173-1181.
6. Fousteri, M., et al. 2006. Cockayne syndrome A and B proteins differentially regulate recruitment of chromatin remodeling and repair factors to stalled RNA polymerase II *in vivo*. *Mol. Cell* 23: 471-482.
7. Ohnuma-Ishikawa, K., et al. 2007. Knockdown of XAB2 enhances all-trans retinoic acid-induced cellular differentiation in all-trans retinoic acid-sensitive and -resistant cancer cells. *Cancer Res.* 67: 1019-1029.
8. Kuraoka, I., et al. 2008. Isolation of XAB2 complex involved in pre-mRNA splicing, transcription, and transcription-coupled repair. *J. Biol. Chem.* 283: 940-950.

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: XAB2 (human) mapping to 19p13.2.

PRODUCT

HCNP (h2): 293T Lysate represents a lysate of human HCNP transfected 293T cells and is provided as 100 μ g protein in 200 μ l SDS-PAGE buffer.

APPLICATIONS

HCNP (h2): 293T Lysate is suitable as a Western Blotting positive control for human reactive HCNP antibodies. Recommended use: 10-20 μ l per lane.

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

RESEARCH USE

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