

HCNP (F-1): sc-271038

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

1. Nakatsu, Y., et al. 2000. XAB2, a novel tetratricopeptide repeat protein involved in transcription-coupled DNA repair and transcription. *J. Biol. Chem.* 275: 34931-34937.
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/>
3. Amada, N., et al. 2003. A novel rat orthologue and homologue for the *Drosophila* crooked neck gene in neural stem cells and their immediate descendants. *J. Biochem.* 133: 615-623.
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.

CHROMOSOMAL LOCATION

Genetic locus: XAB2 (human) mapping to 19p13.2; Xab2 (mouse) mapping to 8 A1.1.

SOURCE

HCNP (F-1) is a mouse monoclonal antibody raised against amino acids 556-855 mapping at the C-terminus of HCNP of human origin.

PRODUCT

Each vial contains 200 μ g IgG $_1$ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

HCNP (F-1) is recommended for detection of HCNP of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g 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).

Suitable for use as control antibody for HCNP siRNA (h): sc-75232, HCNP siRNA (m): sc-75233, HCNP shRNA Plasmid (h): sc-75232-SH, HCNP shRNA Plasmid (m): sc-75233-SH, HCNP shRNA (h) Lentiviral Particles: sc-75232-V and HCNP shRNA (m) Lentiviral Particles: sc-75233-V.

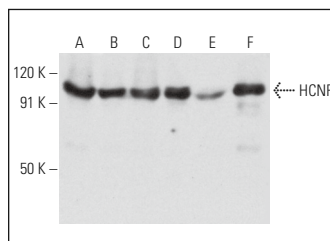
Molecular Weight of HCNP: 100 kDa.

Positive Controls: MCF7 whole cell lysate: sc-2206, c4 whole cell lysate: sc-364186 or C6 whole cell lysate: sc-364373.

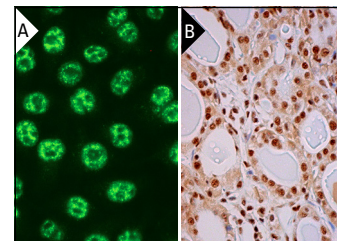
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ 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. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



HCNP (F-1): sc-271038. Western blot analysis of HCNP expression in Jurkat (A), MCF7 (B), c4 (C), BC3H1 (D), C6 (E) and PC-12 (F) whole cell lysates.



HCNP (F-1): sc-271038. Immunofluorescence staining of methanol-fixed HeLa cells showing nuclear localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human thyroid gland tissue showing nuclear and cytoplasmic staining of glandular cells (B).

STORAGE

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

RESEARCH USE

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