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Customer Service: 1-800 786 1236
Technical Service: 214 387 8105
Fax: 214 387 0870
Info@fabgennix.com
www.fabgennix.com

Chromosome 3 Open reading Frame 34 Antibodies

Chromosome 3 Open Reading Frame 34 Cat # Orf34-101AP.

The human nuclear matrix proteins ((hNMPs) are largely responsible for protein assembly by reassembling and potential filament forming capability (1). The hNMP200 is one of the members of about 350 proteins that are involved in chaperoning and reassembly of proteins in nuclear matrix proteins. The hNMP200 is a novel 56 kDa nuclear protein that is homologues to S.cerevidiae protein PRP19, which is an accessory, but essential factor for pre mRNA processing. The hNMP200 gene is assigned to chromosome 11q22 and in mainly confined to nucleoplasmic region. An hNMP200 is a novel 56 kDa nuclear proteins that binds to double stranded DNA, but not the single stranded DNA in a sequence non-specific manner. The hNMP200 is homologues to plant, metazoans and yeast protein pre mRNA processing protein 19 (prp19) that is an assessor, but essential factor for pre mRNA processing. The hNMP 200 sequence contained 5 consensus WD repeats, characteristics of participatory and regulatory function in larger protein assemblies. The hNMP200/hPSO4 expression was noted ubiquitously in a variety of cells and was confined to nuclear region. The hNMP/hPSO4 is expressed manly in nucleolus of cells in the interphase cycle. During cell division hNMP 200 became irregularly distributed in prophase, sparing regions of condensing chromatin. In anaphase it was concentrated in the spindle midzone (3). The hNMP/hPSO4 being a component of the nuclear framework, it may provide structural support for components of the RNA-processing machinery, thereby also modulating splicing activities.

The role of hNMP/hPSO4 in double strand breaks (DSBs) is just emerging (2). hNMP/hPso4 protein is induced 15- to 30-fold in cells by gamma radiation and chemical mutagens but not by UV treatment. Loss of hPso4 expression induced by siRNA results in accumulation of DSBs, apoptosis, and decreased cell survival after DNA damage. We conclude that hPso4 plays a major and previously undefined role in mammalian DNA DSB repair.

The hNMP/hPSO4-selective antibodies were generated against peptide form unique regions of the hNMP/hPSO4 protein. FabGennix Inc. has generated epitope specific rabbit anti-hNMP/hPSO4 polyclonal antibodies utilizing linear and cyclic peptide sequences. These antibodies have been fully characterized for cross reactivity with other members of the bone morphogenetic proteins and other proteins. Limited quantities of the antigenic blocking peptide for hNMP/hPSO4 antibodies is also available.

Catalog #	Host	Description	Antigen/ control	Cross reactivity	Price
hNMP-100P	Rabbit	Human nuclear matrix protein 200 (hNMP) Ab	Peptide antibody	R, M, H	US $205
hNMP-101AP	Rabbit	Affinity purified hNMP Antibody	Peptide antibody	R, M, H	US $235
*PC-hNMP	n/a	Western blot positive control for hNMP	Partially purified hNMP200	N/A	Inquire
P-hNMP	n/a	BMP2 Antigenic blocking Peptide	Antigenic peptide	250 ug	US $85

R = rat; M = mouse; H = humans; R = rabbit * Actual volume is 103-110 µl; WB, Western Blot analyses; IMM, Immunoprecipitation; IHC, Immunohistochemistry, n.d, not determine.

Immunogen: Synthetic peptide corresponding to amino acid from human hPSO4/hNMP200 sequence. The peptide was conjugated to KLH using heterobifunctional cross linker for immunogenizaton.

Concentration: hNMP-100P-100P = neat serum; hNMP-101AP = IgG connetration 0.5-0.75 mg/ml.

Applications: ELISA: Antibody dilution 1:2,000 for ELISA or DOT blot assy. W.B: Antibody dilution 1:500-1,000 for WB using PC-hNMP. IMM: n.d; IHC n.d

Reactivity The antibodies hNMP-101AP label 56 kDa hNMP/hPSO4 protein in PC-hNMP samples.

Protocols: Standard protocol for various applications (Western blot; immunoprecipitation and immunohistochemistry) of this antibody is provided with the product specification sheet, however, FabGennix Inc. recommends investigators to optimize conditions.

Form/Storage: The antiserum is supplied in antibody stabilization buffer with preservatives. For long-term storage of antibody, store at -20°C FabGennix Inc. does not recommend storage of very dilute antibody solutions unless they are prepared in specially formulated multi-use antibody dilution buffer (Cat # DiluOBuffer). Working solutions of antibodies in DiluOBuffer should be filtered through 0.45µ filter after every use for long-term storage.

*Note: Briefly centrifuge to collect liquid, heat or boil PC-hNMP-101AP tube for 1-2 minutes to dissolve any precipitate before use. This product is "ready-to-use" for electrophoresis. After thawing store at room temperature, Repeated freezing and thawing may result in appearance of higher molecular weight immunoreactive bands.

References:

1. C. Gerner et al., 1999, J. Cell. Biochem. 74, 145-151
2. Mahajan KN, Mitchell BS. Role of human Pso4 in mammalian DNA repair and association with terminal deoxynucleotidyl transferase. Proc Natl Acad Sci U S A. 2003 Sep 16;100(19):10746-51. Epub 2003 Sep 5
3. Gotzmann J, Gerner C, Meissner M, Holzmann K, Grimm R, Mikulits W, Sauermann G. hNMP 200: a novel human common nuclear matrix protein combining structural and regulatory functions. Exp Cell Res. 2000 Nov 25;261(1):166-79. Related Articles, Links

* For users who may require large amounts of hNMP-101AP, please enquire about bulk material discounts.
This Product is for Research Use Only and is NOT intended for use in humans or clinical diagnosis.

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