

# p-HMGN3 (47.Ser 31): sc-135764

## BACKGROUND

HMGN3 (high mobility group nucleosome-binding domain-containing protein 3), also known as TRIP7 (thyroid receptor-interacting protein 7), is a 99 amino acid member of the HMGN protein family. Localized to the nucleus, HMGN3 is believed to enhance transcription from chromatin templates by reducing the compactness of the chromatin fibers in the nucleosomes. HMGN3 also interacts with the ligand binding domain of the thyroid receptor. HMGN3 is induced by estrogen, and is abundantly expressed in skeletal muscle, kidney and heart with lower levels found in liver, pancreas and lung. HMGN3 is expressed as two isoforms produced by alternative splicing events.

## REFERENCES

- Lee, J.W., Choi, H.S., Gyuris, J., Brent, R. and Moore, D.D. 1995. Two classes of proteins dependent on either the presence or absence of thyroid hormone for interaction with the thyroid hormone receptor. *Mol. Endocrinol.* 9: 243-254.
- West, K.L., Ito, Y., Birger, Y., Postnikov, Y., Shirakawa, H. and Bustin, M. 2001. HMGN3a and HMGN3b, two protein isoforms with a tissue-specific expression pattern, expand the cellular repertoire of nucleosome-binding proteins. *J. Biol. Chem.* 276: 25959-25969.
- Leong, P.W., Liew, K., Lim, W. and Chow, V.T. 2002. Differential display RT-PCR analysis of enterovirus-71-infected rhabdomyosarcoma cells reveals mRNA expression responses of multiple human genes with known and novel functions. *Virology* 295: 147-159.
- Wu, C., Ma, M.H., Brown, K.R., Geisler, M., Li, L., Tzeng, E., Jia, C.Y., Jurisica, I. and Li, S.S. 2007. Systematic identification of SH3 domain-mediated human protein-protein interactions by peptide array target screening. *Proteomics* 7: 1775-1785.
- Lucey, M.M., Wang, Y., Bustin, M. and Duncan, M.K. 2008. Differential expression of the HMGN family of chromatin proteins during ocular development. *Gene Expr. Patterns* 8: 433-437.
- Cherukuri, S., Hock, R., Ueda, T., Catez, F., Rochman, M. and Bustin, M. 2008. Cell cycle-dependent binding of HMGN proteins to chromatin. *Mol. Biol. Cell* 19: 1816-1824.
- Ueda, T., Furusawa, T., Kurahashi, T., Tessarollo, L. and Bustin, M. 2009. The nucleosome binding protein HMGN3 modulates the transcription profile of pancreatic  $\beta$  cells and affects Insulin secretion. *Mol. Cell. Biol.* 29: 5264-5276.

## CHROMOSOMAL LOCATION

Genetic locus: HMGN3 (human) mapping to 6q14.1; Hmgn3 (mouse) mapping to 9 E2.

## SOURCE

p-HMGN3 (47.Ser 31) is a mouse monoclonal antibody raised against a short amino acid sequence containing Ser 31 phosphorylated HMGN3 of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG<sub>2a</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin. Also available as TransCruz reagent for Gel Supershift and ChIP applications, sc-135764 X, 200  $\mu$ g/0.1 ml.

p-HMGN3 (47.Ser 31) is available conjugated to agarose (sc-135764 AC), 500  $\mu$ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-135764 HRP), 200  $\mu$ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-135764 PE), fluorescein (sc-135764 FITC), Alexa Fluor<sup>®</sup> 488 (sc-135764 AF488), Alexa Fluor<sup>®</sup> 594 (sc-135764 AF594) or Alexa Fluor<sup>®</sup> 647 (sc-135764 AF647), 200  $\mu$ g/ml, for IF, IHC(P) and FCM; and to either Alexa Fluor<sup>®</sup> 680 (sc-135764 AF680) or Alexa Fluor<sup>®</sup> 790 (sc-135764 AF790), 200  $\mu$ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

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## APPLICATIONS

p-HMGN3 (47.Ser 31) is recommended for detection of Ser 31 phosphorylated HMGN3 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for HMGN3 siRNA (h): sc-95436, HMGN3 siRNA (m): sc-146053, HMGN3 shRNA Plasmid (h): sc-95436-SH, HMGN3 shRNA Plasmid (m): sc-146053-SH, HMGN3 shRNA (h) Lentiviral Particles: sc-95436-V and HMGN3 shRNA (m) Lentiviral Particles: sc-146053-V.

p-HMGN3 (47.Ser 31) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of p-HMGN3: 10 kDa.

## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG $\kappa$  BP-HRP: sc-516102 or m-IgG $\kappa$  BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker<sup>™</sup> Molecular Weight Standards: sc-2035, TBS Blotto B Blocking Reagent: sc-2335 (use 50 mM NaF, sc-24988, as diluent), Lambda Phosphatase: sc-200312A and Western Blotting Luminol Reagent: sc-2048.

## 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. Not for resale.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.