

Datasheet for 600-401-I74**Histone H3 phospho S10 Antibody****Overview**

Description:	Anti-Histone H3 [p Ser10] (RABBIT) Antibody - 600-401-I74
Item No.:	600-401-I74
Size:	50 µg
Applications:	Dot Blot, IF, Multiplex, WB
Reactivity:	Human, C. elegans
Host Species:	Rabbit

Product Details

Background:	H3 pS10 is typically associated with activation of transcription of genes associated with histone H3. This modification is linked to the initiation of chromatin condensation in G(2). During mitosis, H3pS10 is required for proper chromosome segregation. Formation of the H3pS10 modification seems to be regulated in part by p53, which interacts with histone modifying complexes. In development of the retina, the presence of H3pS10 is linked to the abundance of eye defects. This developmental effect of H3pS10 seems to be related to Psf2 and GPR84. The human Timeless protein (Tim) regulates the global H3pS10 phosphorylation in G2/M phase. VASP concentrations peak during mitosis in HeLa cells at the same time as H3pS10, indicating that co-responsibility for transition of G2/M phases. AURKB promotes the phosphorylation of histone H3 at pS10. Anti-Histone H3 are ideal for researchers interested in Chromatin Modifiers, Chromatin Research, Histones and Modified Histones, and Epigenetics research.
Synonyms:	rabbit anti-Histone H3 pS10 antibody, H3.3B, H3 histone, family 3A, H3.3AH3F3H3F3B, histone H3.3, MGC87783, MGC87782, H3pS10
Host Species:	Rabbit
Clonality:	Polyclonal
Format:	IgG

Target Details

Gene Name:	HIST2H3C
Reactivity:	Human, C. elegans

PTM Specificity:	Phosphorylation
Immunogen Type:	Conjugated Peptide
Immunogen:	Histone H3 [p Ser10] affinity purified antibody was prepared from whole rabbit serum produced by repeated immunizations with a synthetic phosphorylated peptide surrounding Serine 10 of human Histone H3.2.
Purity/Specificity:	Anti-Histone H3 [p Ser10] was affinity purified from monospecific antiserum by immunoaffinity chromatography. This antibody reacts with human Histone H3.2. A BLAST analysis was used to suggest cross-reactivity with Human, mouse, and C. elegans. Predicted to react with many species including rat, chicken, Xenopus, Drosophila, and plant based on 100% sequence homology. Cross-reactivity with Histone H3 from other sources has not been determined.
Relevant Links:	• UniProtKB - Q71DI3 • NCBI - NP_001005464 • GeneID - 126961

Application Details

Tested Applications:	Dot Blot, IF, Multiplex, WB
Application Note:	Anti-Histone H3 [p Ser10] antibody is tested by Western Blot, Immunofluorescence, and Dot Blot. This antibody is useful for Immunocytochemistry and Chromatin Immunoprecipitation. Specific conditions for reactivity should be optimized by the end user. Expect a band approximately ~15.4 kDa corresponding to Histone H3 protein by Western Blotting in HeLa histone prep lysate or the appropriate cell lysate or extract. Epi-Plus™ antibody production in collaboration with Novus Biologicals.
Assay Dilutions:	All assays should be optimized by the user. Recommended dilutions (if any) may be listed below.
IF:	1:2000
IHC:	1:2000
WB:	1:500

Formulation

Physical State:	Liquid (sterile filtered)
Concentration:	0.44 mg/ml by UV absorbance at 280 nm
Buffer:	0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2
Preservative:	0.01% (w/v) Sodium Azide
Stabilizer:	30% Glycerol

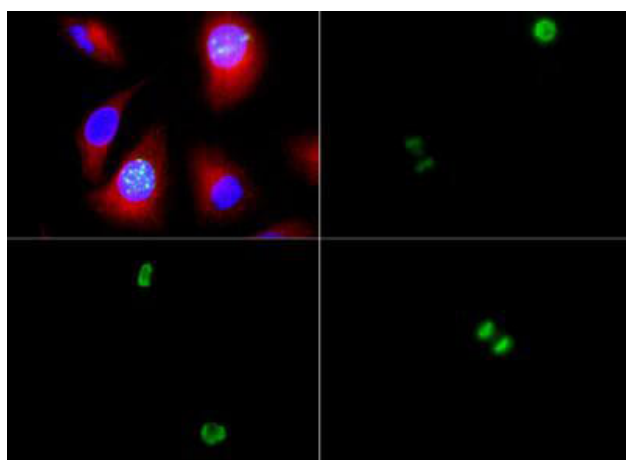
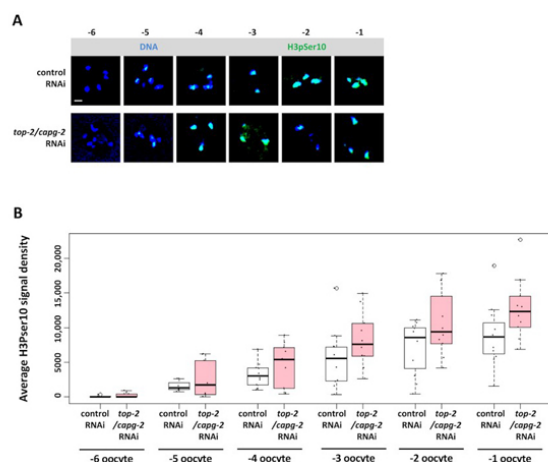
Shipping & Handling

Shipping Condition: Dry Ice

Storage Condition: Store vial at -20° C prior to opening. Aliquot contents and freeze at -20° C or below for extended storage. Avoid cycles of freezing and thawing. Centrifuge product if not completely clear after standing at room temperature. This product is stable for several weeks at 4° C as an undiluted liquid. Dilute only prior to immediate use.

Expiration: Expiration date is one (1) year from date of receipt.

Images



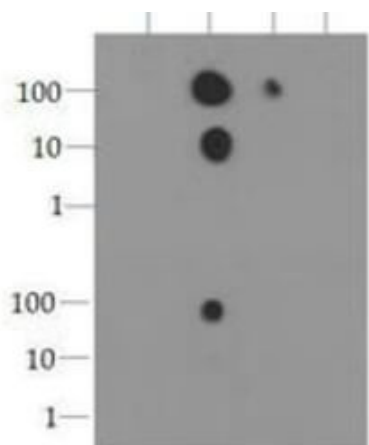
Immunofluorescence Microscopy

TOP-2 and condensin II mediated transcriptional repression in oocytes is independent of cell-cycle timing.

A. N2 animals were treated with control or top-2/capg-2 double RNAi. Gonads from young adults were dissected, fixed, and stained for DNA (blue) and H3pSer10 (green, p/n 600-401-174). Exposure to top-2/capg-2 RNAi does not affect the timing of H3pSer10. Scale bar represents a length of 2 μ m. B. Quantification of data presented in (A). 11 control RNAi and 10 top-2/capg-2 RNAi samples were analyzed for each RNAi treatment. There was no significant difference in H3pSer10 signal after TOP-2 and CAPG-2 co-depletion. Signal density was not normalized. SF2. PMID: 37478128

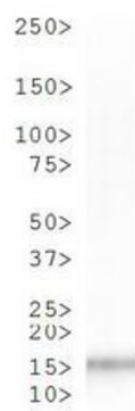
Immunofluorescence Microscopy

Immunofluorescence of Rabbit Anti-Histone H3 [p Ser10] Antibody. Tissue: HeLa cells. Fixation: 0.5% PFA. Antigen retrieval: Not required. Primary antibody: Histone H3 [p Ser10] antibody at a 1:200 dilution for 1 h at RT. Secondary antibody: FITC secondary antibody at 1:10,000 for 45 min at RT. Localization: Histone H3 [p Ser10] is nuclear and chromosomal. Staining: Histone H3 [p Ser10] is expressed in green, nuclei and actin are counterstained with Dapi (blue) and Phalloidin (red).



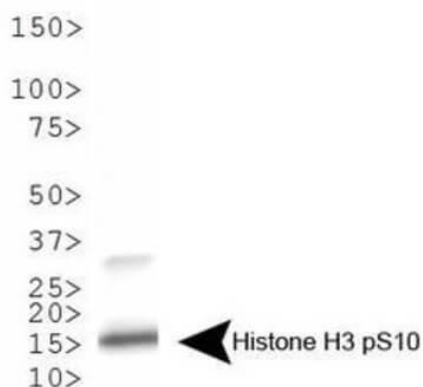
Dot Blot

Dot Blot of Rabbit Histone H3 [p Ser10] Antibody. Lane 1: unmodified. Lane 2: pS10. Lane 3: pS10pT11. Lane 4: pT11. Load: 1, 10, and 100 picomoles of peptide. Primary antibody: Histone H3 [p Ser10] antibody at 0.005 μ g/mL (bottom blot) and 0.025 μ g/mL (top blot) for 45 min at 4°C. Secondary antibody: Dylight™488 rabbit secondary antibody at 1:10,000 for 45 min at RT. Block: 5% BLOTTO overnight at 4°C.



Western Blot

Western Blot of Rabbit Anti-Histone H3 [p Ser10] Antibody. Lane 1: C. elegans embryo lysate. Load: 30 μ g per lane. Primary antibody: Histone H3 [p Ser10] at 1:500 for overnight at 4°C. Secondary antibody: IRDye800™ rabbit secondary antibody at 1:10,000 for 45 min at RT. Block: 5% BLOTTO overnight at 4°C. Predicted/Observed size: ~15 kDa. Other band(s): None.



Western Blot

Western Blot of Rabbit Anti-Histone H3 [p Ser10] Antibody. Lane 1: HeLa histone prep lysates. Load: 30 μ g per lane. Primary antibody: Histone H3 [p Ser10] at 1:500 for overnight at 4°C. Secondary antibody: IRDye800™ rabbit secondary antibody at 1:10,000 for 45 min at RT. Block: 5% BLOTTO overnight at 4°C. Predicted/Observed size: ~15 kDa. Other band(s): None.

References

- Belew M et al. Characterization of factors that underlie transcriptional silencing in *C. elegans* oocytes. *PLoS Genet.* (2023)

Disclaimer

This product is for research use only and is not intended for therapeutic or diagnostic applications. Please contact a technical service representative for more information. All products of animal origin manufactured by Rockland Immunochemicals are derived from starting materials of North American origin. Collection was performed in United States Department of Agriculture (USDA) inspected facilities and all materials have been inspected and certified to be free of disease and suitable for exportation. All properties listed are typical characteristics and are not specifications. All suggestions and data are offered in good faith but without guarantee as conditions and methods of use of our products are beyond our control. All claims must be made within 30 days following the date of delivery. The prospective user must determine the suitability of our materials before adopting them on a commercial scale. Suggested uses of our products are not recommendations to use our products in violation of any patent or as a license under any patent of Rockland Immunochemicals, Inc. If you require a commercial license to use this material and do not have one, then return this material, unopened to: Rockland Inc., P.O. BOX 5199, Limerick, Pennsylvania, USA.