Revision 1

Store at -20C

#12392

hnRNP C1/C2 Antibody

Cell Signaling TECHNOLOGY®

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For Research Use Only. Not for Use in Diagnostic Procedures.

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W	H Mk	Endogenous	40	Rabbit	#P07910	3183

Product Usage Information

Application	Dilution
Western Blotting	1:1000

Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA and 50% glycerol. Store at –20°C. Do not aliquot the antibody.

Specificity/Sensitivity

hnRNP C1/C2 Antibody recognizes endogenous levels of total hnRNP C1/C2 protein. This antibody does not cross-react with other hnRNPCL1 or RALY proteins.

Species predicted to react based on 100% sequence homology

Hamster, Xenopus, Bovine, Dog, Pig, Horse, Guinea Pig

Source / Purification

Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to residues near the amino terminus of human hnRNP C1/C2 protein. Antibodies are purified by protein A and peptide affinity chromatography.

Background

Heterogeneous nuclear ribonucleoprotein C1/C2 (hnRNP C1/C2) has multiple biological functions including transcriptional regulation, DNA repair, and RNA processing. hnRNP C1/C2 acts as a 'molecular ruler' in the mRNA processing pathway, committing nascent transcripts from the chromatin template to the mRNA export pathway once the nascent transcript becomes longer than 200-300 nucleotides (1). hnRNP C1/C2 associates with SWI/SNF and NurD family members to form the locus control region (LCR)-associated remodeling complex (LARC), which binds to β-globin gene promoter to prevent transcriptional silencing. Studies indicate that without hnRNP C1/C2, LARC does not associate with its target DNA sequence (2,3). hnRNP C1/C2 and other hnRNP family members interact with DNA damage response (DDR) proteins (4). hnRNP proteins regulate double stranded break (DSB) repair by promoting either homologous recombination (HR) or non-homologous end joining (NHEJ) (4). hnRNP C1/C2 downregulates the expression of miR-21, which leads to the increased expression of programmed cell death 4 (PDCD4) protein in glioblastoma multiforme (GBM) (5). Research studies have shown that silencing of hnRNP C1/C2 renders GBM cells more susceptible to apoptosis (5).

Background References

1. McCloskey, A. et al. (2012) *Science* 335, 1643-6.
2. Huang, L. et al. (2011) *Mol Cell Biol* 31, 3472-84.
3. Mahajan, M.C. et al. (2005) *Proc Natl Acad Sci U S A* 102, 15012-7.
4. Haley, B. et al. (2009) *Int J Radiat Biol* 85, 643-55.
5. Park, Y.M. et al. (2012) *Mol Cell Biol* 32, 4237-44.

Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

Western Blot Buffer

IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 5% w/v BSA, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

Applications Key

W: Western Blotting

Cross-Reactivity Key

H: Human **Mk:** Monkey

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Limited Uses

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