

**hnRNP C1/C2 (D6S3N) Rabbit mAb**

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|                           |                            |                                   |                        |                                      |                               |                                |
|---------------------------|----------------------------|-----------------------------------|------------------------|--------------------------------------|-------------------------------|--------------------------------|
| <b>Applications:</b><br>W | <b>Reactivity:</b><br>H Mk | <b>Sensitivity:</b><br>Endogenous | <b>MW (kDa):</b><br>40 | <b>Source/Isotype:</b><br>Rabbit IgG | <b>UniProt ID:</b><br>#P07910 | <b>Entrez-Gene Id:</b><br>3183 |
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**Product Usage Information****Application**

Western Blotting

**Dilution**

1:1000

**Storage**

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at -20°C. Do not aliquot the antibody.

**Specificity/Sensitivity**

hnRNP C1/C2 (D6S3N) Rabbit mAb recognizes endogenous levels of total hnRNP C1/C2 protein.

**Source / Purification**

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Ile217 of human hnRNP C1/C2 protein.

**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 nonfat dry milk, 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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