abcam

ab314004

Anti-hnRNP C1/C2 antibody [9G1]

Recombinant

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.4 Preservative: 0.02% Sodium azide Constituents: PBS, 50% Glycerol (glycerin, glycerine), 0.88% Sodium chloride
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Clone number	9G1
Purification technique	Affinity purification
Concentration	0.2 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

WB

Tested

Species	Human
Dilution info	1/500 - 1/5000
Notes	-

IHC-P

Tested

Species	Human
Dilution info	1/50 - 1/300
Notes	-

ICC/IF

Tested

Species	Human
Dilution info	1/20 - 1/200
Notes	-

IP

Tested

Species	Human
Dilution info	1/200 - 1/1000
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	1/50
Notes	-

Target data

See full target information HNRNPC

Function	Binds pre-mRNA and nucleates the assembly of 40S hnRNP particles (PubMed:8264621). Interacts with poly-U tracts in the 3'-UTR or 5'-UTR of mRNA and modulates the stability and the level of translation of bound mRNA molecules (PubMed:12509468, PubMed:16010978, PubMed:7567451, PubMed:8264621).

Single HNRNPC tetramers bind 230-240 nucleotides. Trimers of HNRNPC tetramers bind 700 nucleotides (PubMed:8264621). May play a role in the early steps of spliceosome assembly and pre-mRNA splicing. N6-methyladenosine (m6A) has been shown to alter the local structure in mRNAs and long non-coding RNAs (lncRNAs) via a mechanism named 'm(6)A-switch', facilitating binding of HNRNPC, leading to regulation of mRNA splicing (PubMed:25719671).

Storage

Shipped at conditions	Blue Ice
Appropriate short-term storage duration	1-2 weeks
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	-20°C
Aliquoting information	Upon delivery aliquot
Storage information	Avoid freeze / thaw cycle

Notes

What are the advantages of a recombinant monoclonal antibody?
This product is a recombinant monoclonal antibody, which offers several advantages including:

- High batch-to-batch consistency and reproducibility
- Improved sensitivity and specificity
- Long-term security of supply
- Animal-free batch production

For more information, read more on recombinant antibodies.

Supplementary info

This supplementary information is collated from multiple sources and compiled automatically.

Activity summary	HnRNP C1/C2 also known as heterogeneous nuclear ribonucleoprotein C comprises two alternatively spliced proteins C1 protein and C2 protein which have molecular weights of approximately 39 kDa and 41 kDa respectively. These proteins function mainly in the nucleus and are expressed ubiquitously in various tissues. They play a fundamental role in mRNA processing including pre-mRNA splicing polyadenylation and stabilization. As components of the hnRNP complex they bind to nascent RNA transcripts to regulate their maturation and transport.

Biological function summary	HnRNP C1/C2 participates in the assembly of large ribonucleoprotein complexes that are essential for mRNA metabolism. It acts as a core component of the spliceosome machinery where it influences the alternative splicing of pre-mRNA. Apart from its structural role hnRNP C1/C2 may contribute to the proper assembly and functioning of splicing factors and other proteins such as 4f4 within the nucleus suggesting its important role in gene expression regulation.
Pathways	HnRNP C1/C2 is involved in the RNA processing pathway directly impacting mRNA export and stability. By interacting with other proteins such as serine/arginine-rich splicing factors it modulates the splicing accuracy and efficiency of various transcripts. This participation in the spliceosome pathway emphasizes its importance in ensuring efficient gene expression and processing. hnRNP C1/C2 might also interact with various transcription machinery components linking RNA processing to transcriptional regulation.
Associated diseases and disorders	HnRNP C1/C2 links to neurological diseases and certain cancers. In neurological disorders misregulation of hnRNP C1/C2 can result in aberrant mRNA splicing which may contribute to the pathogenesis of diseases like spinal muscular atrophy. Its involvement in cancer is related to its ability to modulate gene expression and cellular proliferation often observed in tumors with disrupted mRNA processing pathways. HnRNP C1/C2 interactions with proteins such as the tumor suppressor p53 may influence cell cycle regulation and contribute to tumor progression.

Product promise

Tested

We have tested this species and application combination and it works. It is covered by our product promise.

Expected

We have not tested this specific species and application combination in-house, but expect it will work. It is covered by our product promise.

Predicted

This species and application combination has not been tested, but we predict it will work based on strong homology. However, this combination is not covered by our product promise.

Not recommended

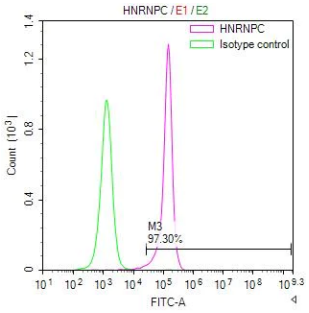
We do not recommend this combination. It is not covered by our product promise.

We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

In the unlikely event of one of our products not working as expected, you are covered by our product promise.

Full details and terms and conditions can be found here:
Terms & Conditions.

3 product images

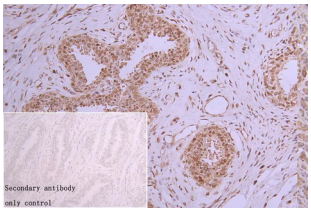


Flow Cytometry (Intracellular) - Anti-hnRNP C1/C2 antibody [9G1] (ab314004)

HnRNP C1/C2 Flow Cytometry (Intracellular) staining of MCF7 cells using rabbit Anti-hnRNP C1/C2 antibody

Overlay Peak curve showing MCF7 cells stained with ab314004 (red line) at 1/50. The cells were fixed in 4% formaldehyde and permeated by 0.2% TritonX-100. T
hen 10% normal goat serum to block non-specific protein-protein interactions followed by the antibody (1ug/1*10^6cells) for 45min at 4°C. The secondary antibody used was FITC-conjugated Goat Anti-rabbit IgG(H+L) at 1/200 dilution for 35min at 4°C.

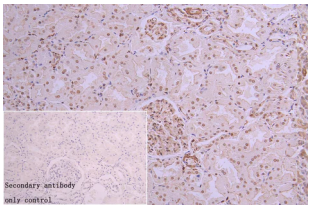
Control antibody (green line) was Rabbit IgG (1ug/1*10^6cells) used under the same conditions. Acquisition of >10,000 events was performed.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-hnRNP C1/C2 antibody [9G1] (ab314004)

HnRNP C1/C2 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining of human breast cancer using rabbit Anti-hnRNP C1/C2 antibody

IHC image of ab314004 diluted at 1/300 and staining in paraffin-embedded human breast cancer performed on a Leica Bond™ system. After dewaxing and hydration, antigen retrieval was mediated by high pressure in a citrate buffer (pH 6.0). Section was blocked with 10% normal goat serum 30min at RT. Then primary antibody (1% BSA) was incubated at 4°C overnight. The primary is detected by a Goat anti-rabbit polymer IgG labeled by HRP and visualized using 0.05% DAB. Secondary antibody only control: uses 1% BSA instead of primary antibody.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-hnRNP C1/C2 antibody [9G1] (ab314004)

HnRNP C1/C2 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining of human kidney tissue using rabbit Anti-hnRNP C1/C2 antibody

IHC image of ab314004 diluted at 1/300 and staining in paraffin-embedded human kidney tissue performed on a Leica Bond™ system. After dewaxing and hydration, antigen retrieval was mediated by high pressure in a citrate buffer (pH 6.0). Section was blocked with 10% normal goat serum 30min at RT. Then primary antibody (1% BSA) was incubated at 4°C overnight. The primary is detected by a Goat anti-rabbit polymer IgG labeled by HRP and visualized using 0.05% DAB. Secondary antibody only control: uses 1% BSA instead of primary antibody

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.