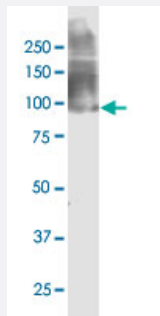


EIF2C2 monoclonal antibody (M01), clone 2E12-1C9

Catalog # H00027161-M01

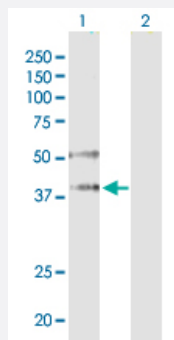
Size 100 ug

Applications



Western Blot (Cell lysate)

EIF2C2 monoclonal antibody (M01), clone 2E12-1C9. Western Blot analysis of EIF2C2 expression in MCF-7.

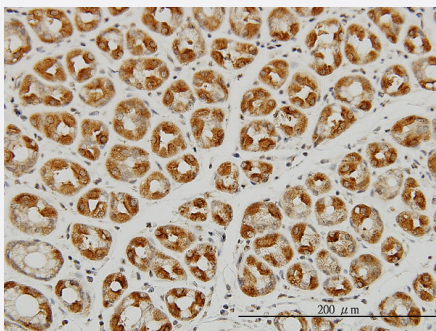


Western Blot (Transfected lysate)

Western Blot analysis of EIF2C2 expression in transfected 293T cell line by EIF2C2 monoclonal antibody (M01), clone 2E12-1C9.

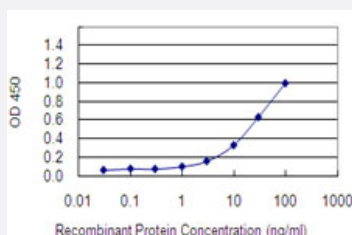
Lane 1: EIF2C2 transfected lysate (Predicted MW: 42.4 KDa).

Lane 2: Non-transfected lysate.



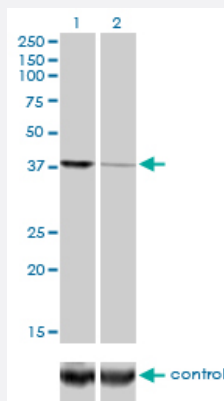
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections)

Immunoperoxidase of monoclonal antibody to EIF2C2 on formalin-fixed paraffin-embedded human stomach. [antibody concentration 3 ug/ml]



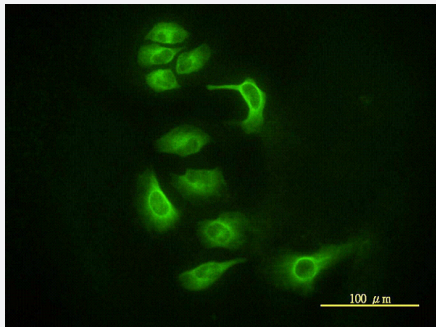
Sandwich ELISA (Recombinant protein)

Detection limit for recombinant GST tagged EIF2C2 is 0.3 ng/ml as a capture antibody.



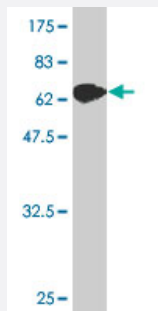
RNAi Knockdown (Antibody validated)

Western blot analysis of EIF2C2 over-expressed 293 cell line, cotransfected with EIF2C2 Validated Chimera RNAi (Cat # H00027161-R01V) (Lane 2) or non-transfected control (Lane 1). Blot probed with EIF2C2 monoclonal antibody (M01), clone 2E12-1C9 (Cat # H00027161-M01). GAPDH (36.1 kDa) used as specificity and loading control.



Immunofluorescence

Immunofluorescence of monoclonal antibody to EIF2C2 on HeLa cell. [antibody concentration 10 ug/ml]



Western Blot detection against Immunogen (68.03 KDa) .

Specification

Product Description

Mouse monoclonal antibody raised against a full length recombinant EIF2C2.

Immunogen

EIF2C2 (AAH07633.1, 483 a.a. ~ 859 a.a) full-length recombinant protein with GST tag. MW of the GST tag alone is 26 KDa.

Sequence

MPIQQQPCFCKYAQGADSVEPMFRHLKNTYAGLQLVVVILPGKTPVYAEVKRVGDTVLGMATQC
VQMKNVQRTPQTLSNLCLKINVKLGGVNNILLPQGRPPVFQQPVIFLGADVTHPPAGDGKKPSIA
AVVGSMDAHNPNYCATVRVQQHRQEIIQDLAAMVRELLIQFYKSTRFKPTRIIFYRDGVSEGQFQQ
VLHHELLAIREACIKLEKDYQPGITFIVVQKRHHTRLFCTDKNERVGKSGNIPAGTTVDTKITHPTFED
FYLCSHAGIQGTSRPSHYHVLWDDNRFSSDELQILTYQLCHTYVRCTRSVSIPAPAYYAHLVAFRA
RYHLVDKEHDSAEGSHTSGQSNRGRDHQALAKAVQVHQDTRLRTMYFA

Host

Mouse

Reactivity	Human
Interspecies Antigen Sequence	Mouse (100); Rat (99)
Isotype	IgG1 Kappa
Quality Control Testing	Antibody Reactive Against Recombinant Protein. Western Blot detection against Immunogen (68.03 KDa) .
Storage Buffer	In 1x PBS, pH 7.4
Storage Instruction	Store at -20°C or lower. Aliquot to avoid repeated freezing and thawing.

Applications

- Western Blot (Cell lysate)

EIF2C2 monoclonal antibody (M01), clone 2E12-1C9. Western Blot analysis of EIF2C2 expression in MCF-7.

[Protocol Download](#)

- Western Blot (Transfected lysate)

Western Blot analysis of EIF2C2 expression in transfected 293T cell line by EIF2C2 monoclonal antibody (M01), clone 2E12-1C9.

Lane 1: EIF2C2 transfected lysate (Predicted MW: 42.4 KDa).

Lane 2: Non-transfected lysate.

[Protocol Download](#)

- Western Blot (Recombinant protein)

[Protocol Download](#)

- Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections)

Immunoperoxidase of monoclonal antibody to EIF2C2 on formalin-fixed paraffin-embedded human stomach. [antibody concentration 3 ug/ml]

[Protocol Download](#)

- Sandwich ELISA (Recombinant protein)

Detection limit for recombinant GST tagged EIF2C2 is 0.3 ng/ml as a capture antibody.

[Protocol Download](#)

- ELISA

- RNAi Knockdown (Antibody validated)

Western blot analysis of EIF2C2 over-expressed 293 cell line, cotransfected with EIF2C2 Validated Chimera RNAi (Cat # H00027161-R01V) (Lane 2) or non-transfected control (Lane 1). Blot probed with EIF2C2 monoclonal antibody (M01), clone 2E12-1C9 (Cat # H00027161-M01). GAPDH (36.1 kDa) used as specificity and loading control.

[Protocol Download](#)

- Immunofluorescence

Immunofluorescence of monoclonal antibody to EIF2C2 on HeLa cell. [antibody concentration 10 ug/ml]

Gene Info — EIF2C2

Entrez GeneID [27161](#)

GeneBank Accession# [BC007633.1](#)

Protein Accession# [AAH07633.1](#)

Gene Name EIF2C2

Gene Alias AGO2, MGC3183, Q10

Gene Description eukaryotic translation initiation factor 2C, 2

Omim ID [606229](#)

Gene Ontology [Hyperlink](#)

Gene Summary This gene encodes a member of the Argonaute family of proteins which play a role in RNA interference. The encoded protein is highly basic, and contains a PAZ domain and a PIWI domain. It may interact with dicer1 and play a role in short-interfering-RNA-mediated gene silencing. Multiple transcript variants encoding different isoforms have been found for this gene. [provided by RefSeq]

Other Designations argonaute 2

Publication Reference

- [Proliferation-promoting roles of linear and circular PVT1 are independent of their ability to bind miRNAs in B-cell lymphoma.](#)

Xing Zhao, Anke van den Berg, Melanie Winkle, Jasper Koerts, Annika Seitz, Debora de Jong, Bea Rutgers, Tineke van der Sluis, Emke Bakker, Joost Kluiver.

International Journal of Biological Macromolecules 2023 Sep; 253(Pt 2):126744.

Application: RIP-A, Human, CA46, DG75, KM-H2, L1236, L428, ST486, SUDHL4, SUDHL5, SUDHL10 cells

- [miR-204 suppresses porcine reproductive and respiratory syndrome virus \(PRRSV\) replication via inhibiting LC3B-mediated autophagy.](#)

Yao Yao, Sihan Li, Yingqi Zhu, Yangyang Xu, Siyuan Hao, Shuyuan Guo, Wen-Hai Feng.

Virologica Sinica 2023 Jul; S1995-820X(23):00084.

Application: IP, Pis, Porcine alveolar macrophages

- [Promiscuous splicing-derived hairpins are dominant substrates of tailing-mediated defense of miRNA biogenesis in mammals.](#)

Seungjae Lee, David Jee, Sid Srivastava, Acong Yang, Abhinav Ramidi, Renfu Shang, Diane Bortolamiol-Becet, Sébastien Pfeffer, Shuo Gu, Jiayu Wen, Eric C Lai.

Cell Reports 2023 Feb; 42(2):112111.

Application: IP, Human, K562 cells

- [Massively parallel identification of mRNA localization elements in primary cortical neurons.](#)

Samantha Mendonsa, Nicolai von Kügelgen, Sayaka Dantsuji, Maya Ron, Laura Breimann, Artem Baranovskii, Inga Lödige, Marieluise Kirchner, Meret Fischer, Nadja Zerna, Lucija Bujanic, Philipp Mertins, Igor Ulitsky, Marina Chekulaeva.

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Application: WB-Ti, Mouse, Mouse cortical neurons

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Application: RNA Immunoprecipitation Chip (RIP) Assay, Human, HepG2 and HepG2.2.15 cells

- [A plant immune protein enables broad antitumor response by rescuing microRNA deficiency.](#)

Ye Qi, Li Ding, Siwen Zhang, Shengze Yao, Jennie Ong, Yi Li, Hong Wu, Peng Du.

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Application: ChIP-Seq, Human, A-549 cells, HepG2 cells

- [Target-Dependent Coordinated Biogenesis of Secondary MicroRNAs by miR-146a Balances Macrophage Activation Processes.](#)

Susanta Chatterjee, Ishita Mukherjee, Shreya Bhattacharjee, Mainak Bose, Saikat Chakrabarti, Suvendra N Bhattacharyya.
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Application: WB, Mouse, RAW264.7 cells

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Lotteke J Y M Ziel-Swier, Yichen Liu, Annika Seitz, Debora de Jong, Jasper Koerts, Bea Rutgers, Rianne Veenstra, Fazlyn R Abdul Razak, Agnieszka Dzikiewicz-Krawczyk, Anke van den Berg, Joost Kluiver.
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Application: RIP-A, Human, L428, SUPHD1 cells

- [miR-424/503 modulates Wnt/ \$\beta\$ -catenin signaling in the mammary epithelium by targeting LRP6.](#)

Erin A Nekritz, Ruth Rodriguez-Barrueco, Koon-Kiu Yan, Meredith L Davis, Rachel L Werner, Laura Devis-Jauregui, Partha Mukhopadhyay, Jiyang Yu, David Llobet-Navas, Jose Silva.
EMBO reports 2021 Oct; e53201.

Application: IP, Human, MCF-10A cells

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Application: WB-Ce, WB-Ti, Mouse, Mouse brain, Mouse hippocampal neurons

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Dipayan De, Suvendra N Bhattacharyya.
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Application: IF, WB-Ce, WB-Tr, Human, C6 glioblastoma cells, HEK 293 cells

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Application: WB-Ce, Mouse, N2a cells

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Application: IP, WB-Tr, Human, ST486 cells

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Application: ChIP, WB-Tr, Human, L02 cells

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Application: IP, WB-Ti, Mouse, Mouse brain, Mouse central nervous system tissues, Mouse spinal cord

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Application: IP, WB-Tr, Human, HUVECs

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Application: IP, WB-Tr, Human, Human articular chondrocytes, Human chondrocytes

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Monika Drobna, Bronisława Szarzyńska, Roman Jaksik, Łukasz Sędek, Anna Kuchmiy, Tom Taghon, Pieter Van Vlierberghe, Tomasz Szczepański, Michał Witt, Małgorzata Dawidowska.

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Application: IP, Human, DND-41 cells

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Bose M, Chatterjee S, Chakrabarty Y, Barman B, Bhattacharyya SN.

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Application: IP, WB-Tr, Human, HEK 293 cells

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Molecular Therapy. Nucleic Acids 2020 Mar; 19:132.

Application: ChIP-Seq, RIP-Seq, Mouse, Rat, H9c2, HL-1 cells, Mouse hearts

- [Nuclear miR-665 aggravates heart failure via suppressing phosphatase and tensin homolog transcription.](#)

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Application: ChIP, Rat, Rat cardiomyocytes

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Application: WB-Tr, Human, HeLa cells

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Application: IP, WB-Ti, WB-Tr, Mouse, Rat, Neuro2a cells, Rat cortical synaptoneurosomes

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Application: IP, Mouse, Mouse hippocampus

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Application: IP, WB, Human, MCF-7 cells

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Application: WB-Tr, Human, HeLa cells

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Cardiovascular Diabetology 2018 Sep; 17(1):123.

Application: IP, Human, Mouse, Rat, H9c2, HL-1 cells, Human cardiac myocytes

- [miR-217 Promotes Cardiac Hypertrophy and Dysfunction by Targeting PTEN.](#)

Nie X, Fan J, Li H, Yin Z, Zhao Y, Dai B, Dong N, Chen C, Wang DW.

Molecular Therapy. Nucleic Acids 2018 Sep; 12:254.

Application: IP, WB-Tr, Rat, H9c2 cells

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Application: IP, Human, Primary BL tumors, tonsil CD19+ B cells

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Application: RIP-A, Human, HEK 293 cells

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Application: IP, WB, Human, Human primary parenchymal lung fibroblasts

- [Glucocorticoids downregulate TLR4 signaling activity via its direct targeting by miR-511-5p.](#)

Curtale G, Renzi TA, Drufuca L, Rubino M, Locati M.

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Application: IP, Human, THP-1 cells, Human monocytes

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Molecular Cell 2017 Aug; 67(4):646.

Application: WB, Purified hAgo2-RNA complex

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Amino Acids 2017 Apr; 187(6):1343.

Application: IP, WB, Human, L428, L540, L1236, KM-H2 cells

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Huang JH, Ku WC, Chen YC, Chang YL, Chu CY.

Scientific Reports 2017 Feb; 7:42853.

Application: WB-Tr, Human, HeLa cells

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Molecular and Cellular Biology 2016 Nov; [Epub].

Application: WB-Tr, Human, HeLa, HEK 293 cells

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Wang WT, Ye H, Wei PP, Han BW, He B, Chen ZH, Chen YQ.

J Hematol Oncol 2016 Nov; 9(1):117.

Application: IP-WB, Human, QBC939 human cholangiocarcinoma cells, RBE human cholangiocarcinoma cells

- [Infected erythrocyte-derived extracellular vesicles alter vascular function via regulatory Ago2-miRNA complexes in malaria.](#)

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Nature Communications 2016 Oct; 7:12727.

Application: WB, IF, Human, Human RBC

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Application: IP, Human, HACs

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Application: Co-IP, African green monkey, MARC cells

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Application: IP, Human, MCF-10A cells

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Kamel W, Segerman B, Punga T, Akusjarvi G.

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Application: WB-Tr, Human, HeLa cells

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Cell 2014 Jul; 158(3):607.

Application: WB-Ce, WB-Tr, Mouse, C2C12 cells, MEFs

- [Characterisation and Comparison of Lactating Mouse and Bovine Mammary Gland miRNomes.](#)

Le Guillou S, Marthey S, Laloe D, Laubier J, Mobuchon L, Leroux C, Le Provost F.

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Application: IP, WB, Mouse, Mammary glands

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Application: IP, Recombinant protein

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Virology 2014 Feb; 450-451:182.

Application: IP, Pig, PAM cells

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Application: IP, Mouse, Mouse cortex, Mouse hippocampus

- [Comprehensive Analysis of MicroRNA \(miRNA\) Targets in Breast Cancer Cells.](#)

Fan M, Krutilina R, Sun J, Sethuraman A, Yang CH, Wu ZH, Yue J, Pfeffer LM.

The Journal of Biological Chemistry 2013 Sep; 288(38):27480.

Application: IP, IP-WB, Human, MCF-7, MDA-MB-231 cells

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Genes & Development 2013 Jul; 27(14):1624.

Application: IF, WB, Human, HeLa cells

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PNAS 2013 Jul; 110(28):11499.

Application: RIP-A, Human, Monocytes, THP-1 cells

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FASEB Journal 2013 Oct; 27(10):4017.

Application: RIP-A, Human, HEK 293 cells

- [Activated platelets can deliver mRNA regulatory Ago2{middle dot}microRNA complexes to endothelial cells via microparticles.](#)

Laffont B, Corduan A, Ple H, Duchez AC, Cloutier N, Boilard E, Provost P.

Blood 2013 Jul; 122(2):253.

Application: IP, WB-Ce, Human, Platelets

- [The microRNA-342-5p Fosters Inflammatory Macrophage Activation Through an Akt1- and microRNA-155-Dependent Pathway During Atherosclerosis.](#)

Wei Y, Nazari-Jahantigh M, Chan L, Zhu M, Heyll K, Corbalan-Campos J, Hartmann P, Thiemann A, Weber C, Schober A.

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Application: IP, Mouse, Macrophages

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Oncogene 2014 Feb; 33(6):702.

Application: IP, Human, FaDu cells

- [Increasing expression of microRNA 181 inhibits porcine reproductive and respiratory syndrome virus replication and has implications for controlling virus infection.](#)

Guo XK, Zhang Q, Gao L, Li N, Chen XX, Feng WH.

Journal of Virology 2013 Jan; 87(2):1159.

Application: WB-Ce, Pig, Porcine alveolar macrophages

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Application: WB, Human, HeLa

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Application: WB-Tr, Human, HEK 293 cells

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Nucleic Acids Research 2013 Jan; 41(1):518.

Application: WB, Human, HEK 293 cells

- [MicroRNA-155 promotes atherosclerosis by repressing Bcl6 in macrophages.](#)

Nazari-Jahantigh M, Wei Y, Noels H, Akhtar S, Zhou Z, Koenen RR, Heyll K, Gremse F, Kiessling F, Grommes J, Weber C, Schober A.

The Journal of Clinical Investigation 2012 Nov; 122(11):4190.

Application: IP, Mouse, Mouse macrophages

- [The p38/MK2-driven exchange between tristetraprolin and HuR regulates AU-rich element-dependent translation.](#)

Tiedje C, Ronkina N, Tehrani M, Dhamija S, Laass K, Holtmann H, Kotlyarov A, Gaestel M.

PLoS Genetics 2012 Sep; 8(9):e1002977.

Application: WB, Monkey, MK2 cells

- [HIV-1 Gag co-opts a cellular complex containing DDX6, a helicase that facilitates capsid assembly.](#)

Reed JC, Molter B, Geary CD, McNevin J, McElrath J, Giri S, Klein KC, Lingappa JR.

The Journal of Cell Biology 2012 Aug; 198(3):439.

Application: WB-Ce, Human, H9-HIV cells

- [Generation of miRNA sponge constructs.](#)

Kliver J, Slezak-Prochazka I, Smigielska-Czepiel K, Halsema N, Kroesen BJ, van den Berg A.

Methods 2012 Oct; 58(2):113.

Application: IP

- [MicroRNAs regulate p21\(Waf1/Cip1\) protein expression and the DNA damage response in human embryonic stem cells.](#)

Dolezalova D, Mraz M, Barta T, Plevova K, Vinarsky V, Holubcova Z, Jaros J, Dvorak P, Pospisilova S, Hampl A.

Stem Cells 2012 Jul; 30(7):1362.

Application: WB-Ce, Human, Human embryonic stem cells

- [A pathogenic mechanism in Huntington's disease involves small CAG-repeated RNAs with neurotoxic activity.](#)

Bañez-Coronel M, Porta S, Kagerbauer B, Mateu-Huertas E, Pantano L, Ferrer I, Guzmán M, Estivill X, Martí E.

PLoS Genetics 2012 Feb; 8(2):e1002481.

Application: WB-Tr, Human, SH-SY5Y cells

- [Regulation of Cyclin T1 and HIV-1 Replication by MicroRNAs in Resting CD4+ T Lymphocytes.](#)

Chiang K, Sung TL, Rice AP.

Journal of Virology 2011 Dec; 86(6):3244.

Application: IP-WB, Human, Jurkat cells

- [Regulation of human chondrocyte function through direct inhibition of cartilage master-regulator SOX9 by miRNA-145.](#)

Martinez-Sanchez A, Dudek KA, Murphy CL.

The Journal of Biological Chemistry 2012 Jan; 287(2):916.

Application: IP, Human, Articular chondrocytes

- [Fragile X Related Protein 1 Clusters with Ribosomes and Messenger RNAs at a Subset of Dendritic Spines in the Mouse Hippocampus.](#)

Cook D, Del Rayo Sanchez-Carbente M, Lachance C, Radzioch D, Tremblay S, Khandjian EW, Desgroseillers L, Murai KK.

PLoS One 2011 Oct; 6(10):e26120.

Application: IF, Mouse, Hippocampus, Neurons

- [Characterization of extracellular circulating microRNA.](#)

Turchinovich A, Weiz L, Langheinz A, Burwinkel B.

Nucleic Acids Research 2011 Sep; 39(16):7223.

Application: IP, WB-Tr, Human, MCF-7 cells, Plasma, Retinates

- [Limiting Ago protein restricts RNAi and microRNA biogenesis during early development in Xenopus laevis.](#)

Lund E, Sheets MD, Imboden SB, Dahlberg JE.

Genes & Development 2011 Jun; 25(11):1121.

Application: WB-Ti, WB-Tr, Xenopus laevis, Embryos, Oocytes

- [HuR-dependent loading of miRNA RISC to the mRNA encoding the Ras-related small GTPase RhoB controls its translation during UV-induced apoptosis.](#)

Glorian V, Maillot G, Poles S, Iacovoni JS, Favre G, Vagner S.

Cell Death and Differentiation 2011 Nov; 18(11):1692.

Application: IP, Human, Keratinocyte cells

- [Viral RNAi Suppressor Reversibly Binds siRNA to Outcompete Dicer and RISC via Multiple Turnover.](#)

Rawlings RA, Krishnan V, Walter NG.

J Mol Biol 2011 Feb; 408:262.

Application: WB-Ce, Human, HeLa cells

- [The QKI-6 RNA Binding Protein Localizes with the MBP mRNAs in Stress Granules of Glial Cells.](#)

Wang Y, Lacroix G, Haines J, Doukhanine E, Almazan G, Richard S.

PLoS One 2010 Sep; 5(9):e12824.

Application: IF, WB-Ce, WB-Tr, Human, Rat, Rat oligodendrocytes, U343 cells

- [A dicer-independent miRNA biogenesis pathway that requires Ago catalysis.](#)

Cheloufi S, Dos Santos CO, Chong MM, Hannon GJ.

Nature 2010 Jun; 465(7298):584.

Application: IP, WB, Mouse, Embryonic stem cells, Livers

- [P-Body Loss Is Concomitant with Formation of a Messenger RNA Storage Domain in Mouse Oocytes.](#)

Flemr M, Ma J, Schultz RM, Svoboda P.

Biology of Reproduction 2010 May; 82(5):1008.

Application: IF, Mouse, Oocytes

- [RNA binding motif protein 4 translocates to cytoplasmic granules and suppresses translation via Argonaute2 during muscle cell differentiation.](#)

Lin JC, Tam WY.

The Journal of Biological Chemistry 2009 Sep; 284(50):34658.

Application: IF, WB, Mouse, C2C12, HEK 293 cells

- [A high throughput experimental approach to identify miRNA targets in human cells.](#)

Tan LP, Seinen E, Duns G, de Jong D, Sibon OC, Poppema S, Kroesen BJ, Kok K, van den Berg A.

Nucleic Acids Research 2009 Nov; 37(20):e137.

Application: IP, Human, L428, L1236 cells

- [Existence of a microRNA pathway in anucleate platelets.](#)

Landry P, Plante I, Ouellet DL, Perron MP, Rousseau G, Provost P.

Nature Structural & Molecular Biology 2009 Sep; 16(9):961.

Application: IF, WB, Human, Megakaryocytes, Platelets

- [Dynamic Interaction between P-Bodies and Transport Ribonucleoprotein Particles in Dendrites of Mature Hippocampal Neurons.](#)

Zeitelhofer M, Karra D, Macchi P, Tolino M, Thomas S, Schwarz M, Kiebler M, Dahm R.

Journal of Neuroscience 2008 Jul; 28(30):7555.

Application: IF, WB, Rat, Embryonic day 17 (E17) rat hippocampal neurons

- [Argonaute2 Is Essential for Mammalian Gastrulation and Proper Mesoderm Formation.](#)

Alisch RS, Jin P, Epstein M, Caspary T, Warren ST.

PLoS Genetics 2007 Dec; 3(12):e227.

Application: WB-Ti, Mouse, Mouse embryo

- [Reduced levels of Ago2 expression result in increased siRNA competition in mammalian cells.](#)

Vickers TA, Lima WF, Nichols JG, Crooke ST.

Nucleic Acids Research 2007 Sep; 35(19):6598.

Application: WB-Ce, Human, HeLa, T47D, U87 cells

- [Ribonuclease Dicer Cleaves Triplet Repeat Hairpins into Shorter Repeats that Silence Specific Targets.](#)

Krol J, Fiszler A, Mykowska A, Sobczak K, de Mezer M, Krzyzosiak WJ.

Molecular Cell 2007 Feb; 25(4):575.

Application: WB, Human, Myotonic dystrophy type 1 (DM1) fibroblast cells

Disease

- [Adenocarcinoma](#)
- [Carcinoma](#)
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- [Genetic Predisposition to Disease](#)
- [Kidney Neoplasms](#)
- [Lung Neoplasms](#)
- [Mouth Neoplasms](#)
- [Precancerous Conditions](#)