## Anti-DHX9 pAb

CODE No. RN063PW

| CLONALITY | Polyclonal |
| :--- | :--- |
| ISOTYPE | Rabbit Ig, affinity purified |
| QUANTITY | $100 \mu \mathrm{~L}, 1 \mathrm{mg} / \mathrm{mL}$ |

## SOURCE <br> FORMURATION STORAGE

Purified Ig from rabbit serum
PBS containing 50\% Glycerol ( pH 7.2 ). No preservative is contained.
This antibody solution is stable for one year from the date of purchase when stored at $-20^{\circ} \mathrm{C}$.

## APPLICATIONS-CONFIRMED

Western blotting Immunoprecipitation

1:1,000 for chemiluminescence detection system $5 \mu \mathrm{~L} / 500 \mu \mathrm{~L}$ of cell extract from $2 \times 10^{7}$ cells

SPECIES CROSS REACTIVITY on WB

| Species | Human | Mouse | Rat | Hamster |
| :---: | :---: | :---: | :---: | :---: |
| Cell | HeLa, 293T, Jurkat, K562 | NIH/3T3, WR19L | Not tested | CHO |
| Reactivity | + | + |  | + |

Entrez Gene ID 1660 (Human), 13211 (Mouse)

For more information, please visit our web site https://ruo.mbl.co.jp/

LICENSING OPPORTUNITY: The RIP-Assay uses patented technology (US patent No. 6,635,422, US patent No. $7,504,210$ ) of Ribonomics, Inc. MBL manufactures and distributes this product under license from Ribonomics, Inc. Researchers may use this product for their own research. Researchers are not allowed to use this product or RIP-Assay technology for commercial purpose without a license. For commercial use, please contact us for licensing opportunities at RIP@mbl.co.jp

## RELATED PRODUCTS

RIP-Assay Kit

| RN1001 | RIP-Assay Kit |
| :--- | :--- |
| RN1005 | RIP-Assay Kit for microRNA |

RIP-Certified Antibody
RN001P Anti-EIF4E (polyclonal)
RN002P Anti-EIF4G1 (polyclonal)
RN003P Anti-EIF4G2 (polyclonal)
RN004P Anti-ELAVL1/HuR (polyclonal)
RN005P Anti-ELAVL2/HuB (polyclonal)
RN006P Anti-ELAVL3/HuC (polyclonal)
RN007P Anti-IGF2BP1/IMP1 (polyclonal)
RN008P Anti-IGF2BP2/IMP2 (polyclonal)
RN009P Anti-IGF2BP3/IMP3 (polyclonal)
RN010P Anti-MSI1/Musashil (polyclonal)
RN011P Anti-PTBP1 (polyclonal)
RN012P Anti-STAU1 (polyclonal)
RN013P Anti-STAU2 (polyclonal)
RN014P Anti-TIA1 (polyclonal)
RN015P Anti-YBX1 (polyclonal)
RN016P Anti-FMR1 (polyclonal)
RN017P Anti-FXR1 (polyclonal)
RN018P Anti-FXR2 (polyclonal)
RN019P Anti-HNRNPK (polyclonal)
RN020P Anti-ILF3 (polyclonal)
RN021P Anti-KHDRBS1 (polyclonal)
RN022P Anti-PABPC4 (polyclonal)
RN024P Anti-PCBP1 (polyclonal)
RN025P Anti-PCBP2 (polyclonal)
RN026P Anti-PUM1 (polyclonal)
RN027P Anti-PUM2 (polyclonal)
RN028P Anti-EIF2C1/AGO1 (polyclonal)
RN032P Anti-CIRBP (polyclonal)
RN033P Anti-TNRC6A/GW182 (polyclonal)
RN037P Anti-AUH (polyclonal)
RN038P Anti-CPEB1 (polyclonal)
RN041P Anti-KHDRBS2/SLM1 (polyclonal)
RN045P Anti-SLBP (polyclonal)
RN001M Anti-IGF2BP1/IMP1 (6H6)
RN003M Anti-EIF2C2/AGO2 (1B1-E2H5)

## RIP-Assay Starter Kit

Each RIP-Assay Starter Kit contains $40 \mu \mathrm{~g}$ of RIP-Certified Antibody and RIP-Assay Kit.

RN001PK RIP-Assay Starter Kit EIF4E (polyclonal)
RN002PK RIP-Assay Starter Kit EIF4G1 (polyclonal)
RN003PK RIP-Assay Starter Kit EIF4G2 (polyclonal)
RN004PK RIP-Assay Starter Kit ELAVL1/HuR (polyclonal)
RN005PK RIP-Assay Starter Kit ELAVL2/HuB (polyclonal)
RN006PK RIP-Assay Starter Kit ELAVL3/HuC (polyclonal)
RN007PK RIP-Assay Starter Kit IGF2BP1/IMP1 (polyclonal)
RN008PK RIP-Assay Starter Kit IGF2BP2/IMP2 (polyclonal)
RN009PK RIP-Assay Starter Kit IGF2BP3/IMP3 (polyclonal)
RN010PK RIP-Assay Starter Kit MSI1/Musashi1 (polyclonal)
RN011PK RIP-Assay Starter Kit PTBP1 (polyclonal)
RN012PK RIP-Assay Starter Kit STAU1 (polyclonal)
RN013PK RIP-Assay Starter Kit STAU2 (polyclonal)
RN014PK RIP-Assay Starter Kit TIA1 (polyclonal)

RN015PK RIP-Assay Starter Kit YBX1 (polyclonal)
RBP Antibody
RBP Antibody works on WB and /or IP, but not certified for working on RIP-Assay.

RN023PW Anti-PABPN1 (polyclonal)
RN028PW Anti-EIF2C1/AGO1 (polyclonal)
RN029PW Anti-EIF2C2/AGO2 (polyclonal)
RN030PW Anti-DICER1 (polyclonal)
RN031PW Anti-ZFP36 (polyclonal)
RN034PW Anti-CUGBP1 (polyclonal)
RN035PW Anti-CUGBP2 (polyclonal)
RN036PW Anti-ACO1/IRP1 (polyclonal)
RN039PW Anti-CPEB2 (polyclonal)
RN040PW Anti-CPEB4 (polyclonal)
RN042PW Anti-MBNL1 (polyclonal)
RN043PW Anti-NOVA1 (polyclonal)
RN044PW Anti-NOVA2 (polyclonal)
RN046PW Anti-SYNCRIP/HNRNPQ (polyclonal)
RN047PW Anti-PTBP2 (polyclonal)
RN048PW Anti-G3BP1 (polyclonal)
RN049PW Anti-G3BP2 (polyclonal)
RN050PW Anti-GRSF1 (polyclonal)
RN051PW Anti-HDLBP/Vigilin (polyclonal)
RN052PW Anti-HNRNPC (polyclonal)
RN053PW Anti-PAIP1 (polyclonal)
RN054PW Anti-PCBP3 (polyclonal)
RN055PW Anti-AIMP1/SCYE1 (polyclonal)
RN056PW Anti-SERBP1 (polyclonal)
RN057PW Anti-TARBP1 (polyclonal)
RN058PW Anti-TARBP2 (polyclonal)
RN059PW Anti-TIAL1 (polyclonal)
RN060PW Anti-HNRNPD/AUF1 (polyclonal)
RN061PW Anti-HNRNPA0 (polyclonal)
RN062PW Anti-DGCR8 (polyclonal)
RN063PW Anti-DHX9 (polyclonal)
RN064PW Anti-FUSIP1 (polyclonal)
RN065PW Anti-KHSRP (polyclonal)
RN066PW Anti-KIAA0020 (polyclonal)
RN067PW Anti-PPP1R10 (polyclonal)
RN068PW Anti-PPP1R8 (polyclonal)
RN069PW Anti-RBM14 (polyclonal)
RN070PW Anti-RPS10 (polyclonal)
RN071PW Anti-RPS19 (polyclonal)
RN072PW Anti-RPS6 (polyclonal)
RN073PW Anti-RPS9 (polyclonal)
RN074PW Anti-SSB (polyclonal)
RN075PW Anti-PPARGC1B (polyclonal)
RN076PW Anti-PPRC1 (polyclonal)
RN077PW Anti-SMN1 (polyclonal)
RN078PW Anti-SMNDC1 (polyclonal)
RN002MW Anti-CUGBP1 (3B1)
RN003MW Anti-EIF2C2/AGO2 (1B1-E2H5)
For the latest information of RiboCluster Profiler ${ }^{\mathrm{TM}}$, please visit our website at https://ruo.mbl.co.jp/je/rip-assay/

## SDS-PAGE \& Western blotting

1) Wash $1 \times 10^{7}$ cells 3 times with PBS and suspend them in 1 mL of Laemmli's sample buffer, then sonicate briefly (up to 20 seconds).
2) Boil the samples for 3 minutes and centrifuge. Load $10 \mu \mathrm{~L}$ of the sample per lane in a 1-mm-thick SDS-polyacrylamide gel (7.5\% acrylamide) for electrophoresis.
3) Blot the protein to a polyvinylidene difluoride (PVDF) membrane at $1 \mathrm{~mA} / \mathrm{cm}^{2}$ for 1 hour in a semi-dry transfer system (Transfer Buffer: 25 mM Tris, 190 mM glycine, $20 \% \mathrm{MeOH}$ ). See the manufacture's manual for precise transfer procedure.
4) To reduce nonspecific binding, soak the membrane in $5 \%$ skimmed milk (in PBS, pH 7.2 ) for 1 hour at room temperature, or overnight at $4^{\circ} \mathrm{C}$.
5) Wash the membrane with PBS-T ( 5 minutes $x 3$ times).
6) Incubate the membrane with primary antibody diluted with PBS, pH 7.2 containing $1 \%$ skimmed milk as suggested in the APPLICATIONS for 1 hour at room temperature. (The concentration of antibody will depend on the conditions.)
7) Wash the membrane with PBS-T [ $0.05 \%$ Tween-20 in PBS] ( 10 minutes $x 3$ times).
8) Incubate the membrane with the $1: 5,000$ anti-rabbit IgG-HRP (MBL; code no. 458 ) diluted with $1 \%$ skimmed milk (in PBS, pH 7.2 ) for 1 hour at room temperature.
9) Wash the membrane with PBS-T ( 10 minutes $x 3$ times).
10) Wipe excess buffer on the membrane, then incubate it with appropriate chemiluminescence reagent for 1 minute. Remove extra reagent from the membrane by dabbing with paper towel, and seal it in plastic wrap.
11) Expose to an X-ray film in a dark room for 3 minute. Develop the film as usual. The condition for exposure and development may vary.
(Positive controls for Western blotting; 293T, HeLa, Jurkat, K562, NIH/3T3 and WR19L)


Western blot analysis of DHX9
Lane 1: 293T
Lane 2: HeLa
Lane 3: Jurkat
Lane 4: K562
Lane 5: NIH/3T3
Lane 6: WR19L
Immunoblotted with RN063PW

## Immunoprecipitation

1) Wash $4 \times 10^{7}$ cells 2 times with PBS and resuspend them with 1 mL of ice-cold Lysis buffer ( $150 \mathrm{mM} \mathrm{NaCl}, 20 \mathrm{mM} \mathrm{Tris-HCl}$, $\mathrm{pH} 8.0,0.1 \%$ NP-40, 10 mM EDTA) containing appropriate protease inhibitors. Vortex for 10 seconds, then leave on ice for 10 minutes.
2) Centrifuge the tube at $12,000 \mathrm{xg}$ for 5 minutes at $4^{\circ} \mathrm{C}$ and transfer the supernatant to another tube.
3) Add $40 \mu \mathrm{~L}$ of $50 \%$ protein A agarose beads slurry resuspended in Lysis Buffer into the supernatant. Incubate it at $4^{\circ} \mathrm{C}$ with rotating for 1 hour.
4) Centrifuge the tube at $2,000 \mathrm{xg}$ for 2 minutes at $4^{\circ} \mathrm{C}$ and transfer the supernatant to another tube (precleared sample).
5) Mix $20 \mu \mathrm{~L}$ of $50 \%$ protein A agarose beads slurry resuspended in PBS with normal rabbit IgG (RIP-Assay Kit) or anti-DHX9 pAb at the amount of suggested in the APPLICATIONS, then add 1 mL of Lysis Buffer into each tube. Incubate with gentle agitation for 1 hour at $4^{\circ} \mathrm{C}$.
6) Wash the beads once with ice-cold Lysis Buffer (centrifuge the tube at $2,000 \mathrm{xg}$ for 1 minute). Carefully discard the supernatant using a pipettor without disturbing the beads.
7) Add $500 \mu \mathrm{~L}$ of cell lysate (precleared sample from step 4), then incubate with gentle agitation for 3 hour at $4^{\circ} \mathrm{C}$.
8) Wash the beads 4 times with Wash Buffer (centrifuge the tube at $2,000 \mathrm{xg}$ for 1 minute).
9) Resuspend the beads in $20 \mu \mathrm{~L}$ of Laemmli's sample buffer, boil for 3 minutes, and centrifuge for 5 minutes. Use $20 \mu \mathrm{~L}$ of the sample per lane in a 1-mm-thick SDS-polyacrylamide gel (7.5\% acrylamide) for electrophoresis.
10) Blot the protein to a polyvinylidene difluoride (PVDF) membrane at $1 \mathrm{~mA} / \mathrm{cm}^{2}$ for 1 hour in a semi-dry transfer system (Transfer Buffer: 25 mM Tris, 190 mM glycine, $20 \% \mathrm{MeOH}$ ). See the manufacture's manual for precise transfer procedure.
11) To reduce nonspecific binding, soak the membrane in $5 \%$ skimmed milk (in PBS, pH 7.2 ) for 1 hour at room temperature, or overnight at $4^{\circ} \mathrm{C}$.
12) Wash the membrane with PBS-T ( 5 minutes $x 3$ times).
13) Incubate the membrane with primary antibody diluted with PBS, pH 7.2 containing $1 \%$ skimmed milk as suggested in the APPLICATIONS for 1 hour at room temperature. (The concentration of antibody will depend on the conditions.)
14) Wash the membrane with PBS-T [ $0.05 \%$ Tween- 20 in PBS] ( 10 minutes x 3 times).
15) Incubate the membrane with the $1: 1,000$ Rabbit TrueBlot ${ }^{\circledR}$ anti-Rabbit IgG-HRP (eBioscience; code no. 18-8816-33) diluted with $1 \%$ skimmed milk (in PBS, pH 7.2 ) for 1 hour at room temperature.
16) Wash the membrane with PBS-T ( 10 minutes $x 3$ times).
17) Wipe excess buffer on the membrane, then incubate it with appropriate chemiluminescence reagent for 1 minute. Remove extra reagent from the membrane by dabbing with paper towel, and seal it in plastic wrap.
18) Expose to an X-ray film in a dark room for 3 minute. Develop the film as usual. The condition for exposure and development may vary.
(Positive control for Immunoprecipitation; HeLa)

# Immunoprecipitation of DHX9 from HeLa 

Lane 1: Input

Lane 2: IP with normal rabbit IgG
Lane 3: IP with RN063PW
Immunoblotted with RN063PW

## Ribonomics

