

Anti Human AGO2, Monoclonal Antibody (Clone No. : 4G8)

Argonaute2 (AGO2) was isolated as one of the main components of RISC (RNA-induced silencing complex). AGO2 captures siRNA and microRNA which are working as a guide molecule for interaction with target mRNAs in RNAi pathway. In this pathway, AGO2 catalyzes the nicking of target mRNAs and binding between RISC and target mRNAs.

This monoclonal antibody is not only used for western blot and immunohistochemistry, but also immunoprecipitation of hAGO2.

FEATURE

- 1) For IP, Western blot, IHC
- 2) Cross reactivity with human AGO2
- 3) For purification of RNA captured by RISC

INFORMATION

Concentration(protein) : Indicated on the label

Formulation : 0.09% Sodium Azide, 10% Glycerol with 1 × TBS, pH7.4.

Clone No. : 4G8

Subclass : IgG1

Antigen : Recombinant human AGO2.

Storage : 2 ~ 10 °C in the dark. Avoid the freeze and thaw.

APPLICATION DATA

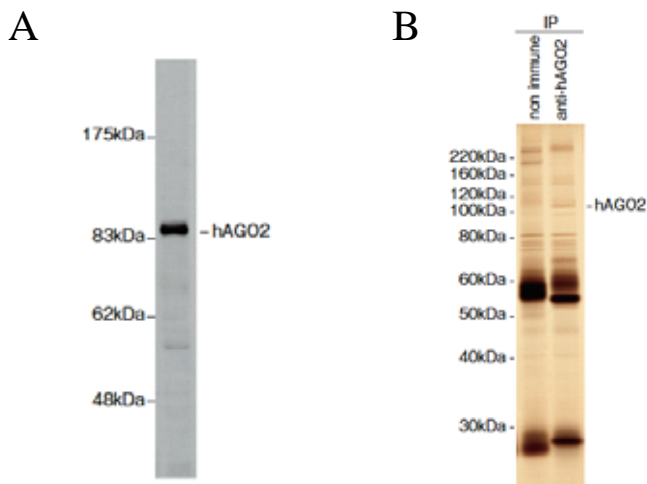
Reference of 4G8

- 1) Miyoshi, K. et al. : Methods Mol. Biol., 442, 29 (2008).
- 2) Azuma-Mukai A. et al.: Proc. Natl. Acad. Sci. U. S. A., 105(23), 7964(2008)

Application	Working Dilution
Western Blot	1 : 100 - 1 : 200
Immunoprecipitation	1 : 50
Immunocytochemistry	1 : 20 - 1 : 50

Organisms	Human	Mouse	Hamster	Rat
Cell	HeLa	P388D1	CHO	SCC-131
Western Blot		×	×	×
Immunoprecipitation		×	×	×
Immunohistochemistry		×	×	×
microRNA Purification		×	×	×

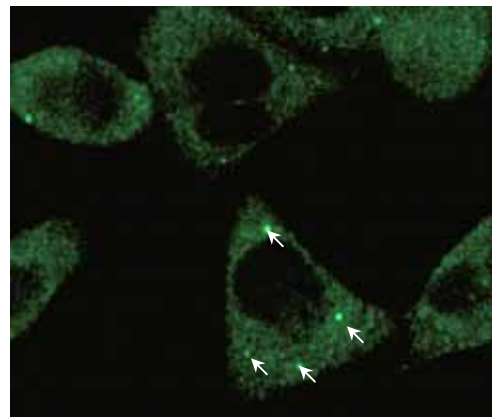
Immunoprecipitation of hAGO2 protein from HeLa cell line



(Provided by Haruhiko Siomi, PhD and Mikiko Siomi, PhD)

Figure 1. (A) Western blot of hAGO2 protein from HeLa cell lysate. The band of hAGO2 protein was detected in approximately 100kDa. Working dilution of this product was 1/100 dilution. Cell number was $5-10 \times 10^7$ cells. (B) Immunoprecipitation of hAGO2 protein from HeLa cell lysate by using Gamma-bind beads immobilized with this antibody. The band of hAGO2 protein was detected in approximately 100kDa by using silver staining. Cell number was 5×10^6 cells.

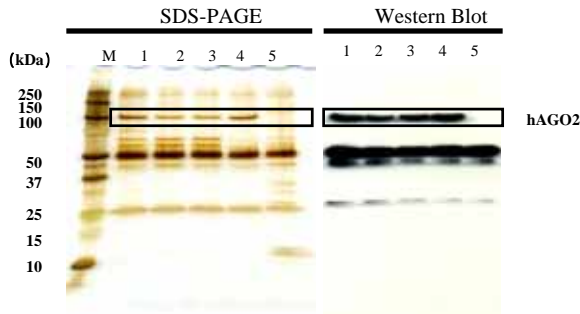
Immunohistochemistry of hAGO2 protein of HeLa cell line



(Provided by Haruhiko Siomi, PhD and Mikiko Siomi, PhD)

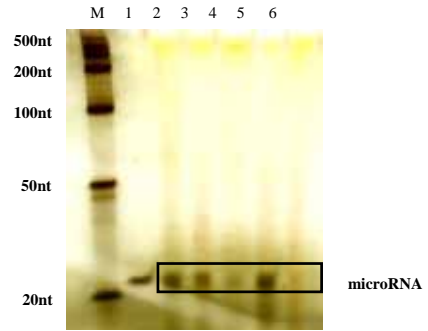
Figure 2. Immunohistochemistry of hAGO2 protein of HeLa cell line by using 1/50 diluted this antibody. hAGO2 protein was localized in P-body, indicated by arrows, and cytoplasm.

Specificity of anti hAGO2, Monoclonal Antibody (4G8)



Lane M : Molecular weight marker
 Lane 1 : HeLa (Human)
 Lane 2 : HepG2 (Human)
 Lane 3 : HEK293 (Human)
 Lane 4 : THP-1 (Human)
 Lane 5 : P388D1 (Mouse)

Figure 3. Immunoprecipitation of hAGO2 protein from human cultured cell lines (HeLa, HepG2, HEK293, THP-1) and mouse cultured cell line (P388D1) by using 20 μ L 10% Protein G slurry immobilized with 10 μ g this antibody. The bands of hAGO2 protein was detected in approximately 100kDa by using silver staining and western blot. Cell number was 5×10^6 cells.



Lane M : Molecular weight marker
 Lane 1 : Single strand RNA (22nt) 1ng
 Lane 2 : HeLa (Human)
 Lane 3 : HepG2 (Human)
 Lane 4 : HEK293 (Human)
 Lane 5 : THP-1 (Human)
 Lane 6 : P388D1 (Mouse)

Figure 4. Purification of microRNA fraction from immunoprecipitated hAGO2 protein. The purified microRNA fraction from human cultured cell lines (HeLa, HepG2, HEK293, THP-1) were specifically detected by Urea-PAGE. Cell number of each cell line is 5×10^6 cells. The applied volume per lane is half of 10 μ L of final solution prepared with an IP.

Code No.	Description	Package Size
NEW !! 014-22023	Anti Mouse AGO2, Monoclonal Antibody	50 μ L
NEW !! 018-22021		100 μ L
NEW !! 011-22033	Anti Human AGO2, Monoclonal Antibody	50 μ L
NEW !! 015-22031		100 μ L
292-66701	microRNA Isolation kit, Human Ago2	10 reactions
290-66501	microRNA Cloning kit Wako	8 reactions
298-65103	Single Strand DNA Ligase, thermostable, recombinant, Solution	200 units
292-65101		500 units

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