

 **My select** sampler set

Loading Control Antibody

Anti-GAPDH mAb

Code No.	Clone	Subclass	Quantity	Concentration
M171-3MS	3H12	Mouse IgG2a κ	20 μ L	3 mg/mL

BACKGROUND: GAPDH (Glyceraldehyde-3-phosphate Dehydrogenase) is a well-known enzyme, which catalyzes of glycolysis. GAPDH is stably and constitutively expressed at high levels in most tissues and cells, it is considered a housekeeping protein. Therefore, GAPDH is often used as a loading control of WB.

SOURCE: This antibody was purified from hybridoma (clone 3H12) supernatant using protein A agarose. This hybridoma was established by fusion of mouse myeloma cell P3U1 with CH3 mouse lymphocyte immunized with the GAPDH from rabbit muscle.

FORMULATION: 60 μ g IgG in 20 μ L volume of PBS containing 50% glycerol, pH 7.2. No preservative is contained.

STORAGE: This antibody solution is stable for one year from the date of purchase when stored at -20°C .

REACTIVITY: This antibody reacts with GAPDH on Western blotting.

APPLICATIONS:

Western blotting; 3 μ g/mL for chemiluminescence detection system

Immunoprecipitation; Not recommended

Immunohistochemistry; Not tested

Immunocytochemistry; Not tested

Flow cytometry; Not tested

Detailed procedure is provided in the following

PROTOCOLS.

SPECIES CROSS REACTIVITY:

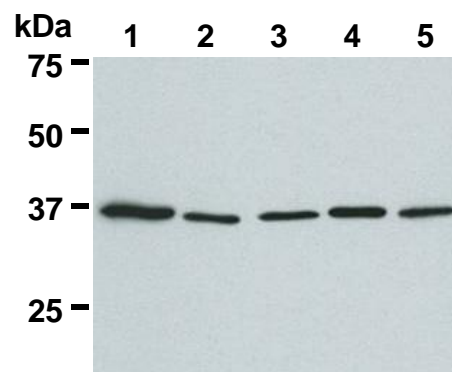
Species	Human	Mouse	Rat	Hamster	Chicken
Cells	HeLa	NIH/3T3	PC12	CHO	MuH1
Reactivity on WB	+	+	+	+	+

INTENDED USE:

For Research Use Only. Not for use in diagnostic procedures.

REFERENCES:

- 1) Tarze, A., *et al.*, *Oncogene* **26**, 2606-2620 (2007)
- 2) Barber, R. D., *et al.*, *Physiol. Genomics*. **21**, 389-395 (2005)



Western blot analysis of GAPDH expression on HeLa (1), NIH/3T3 (2), PC12 (3), CHO (4) and MuH1 (5) using M171-3.

Sample volume: 2 μ g/lane

PROTOCOLS:

SDS-PAGE & Western Blotting

- 1) Wash cells (approximately 1×10^7 cells) 3 times with PBS and resuspend them in 10 volume of cold Lysis buffer (50 mM Tris-HCl, pH 7.5, 150 mM NaCl, 0.05% NP-40, 2 mM EDTA, 10% glycerol) containing protease inhibitors at appropriate concentrations. Incubate it at 4°C with rotating for 30 minutes; thereafter, briefly sonicate the mixture (up to 10 seconds).
- 2) Centrifuge the tube at $12,000 \times g$ for 10 minutes at 4°C and transfer the supernatant to another tube. Measure the protein concentration of the supernatant and add the cold Lysis buffer to make 0.4 mg/mL solution.
- 3) Mix the sample with equal volume of Laemmli's sample buffer.
- 4) Boil the samples for 3 minutes and centrifuge. Load 10 μ L of the sample per lane in a 1-mm-thick SDS-polyacrylamide gel and carry out electrophoresis.
- 5) Blot the protein to a polyvinylidene difluoride (PVDF) membrane at 1 mA/cm^2 for 1 hour in a semi-dry transfer system (Transfer Buffer: 25 mM Tris, 190 mM glycine, 20% MeOH). See the manufacturer's manual for precise transfer procedure.
- 6) To reduce nonspecific binding, soak the membrane in 7.5% skimmed milk (in PBS, pH 7.2) for 1 hour at room temperature, or overnight at 4°C .

- 7) Incubate the membrane for 1 hour at room temperature with primary antibody diluted with PBS (pH 7.2) containing 1% skimmed milk as suggested in the **APPLICATIONS**. (The concentration of antibody will depend on the conditions.)
- 8) Wash the membrane with PBS-T [0.05% Tween-20 in PBS] (5 minutes x 3 times).
- 9) Incubate the membrane with 1:10,000 HRP-conjugated anti-mouse IgG (MBL; code no. 330) diluted with 1% skimmed milk (in PBS, pH 7.2) for 1 hour at room temperature.
- 10) Wash the membrane with PBS-T (5 minutes x 3 times).
- 11) Wipe excess buffer off the membrane, and incubate membrane with an appropriate chemiluminescence reagent for 1 minute.
- 12) Remove extra reagent from the membrane by dabbing with a paper towel, and seal it in plastic wrap.
- 13) Expose the membrane onto an X-ray film in a dark room for 3 minutes. Develop the film under usual settings. The conditions for exposure and development may vary.

(Positive controls for Western blotting; HeLa, NIH/3T3, PC12, CHO, MuH1)

RELATED PRODUCTS:

Loading control antibodies

M171-3	Anti-GAPDH mAb
M171-7	Anti-GAPDH mAb-HRP-DirecT
PM054	Anti- α -Tubulin pAb (2F9)
PM054-7	Anti- α -Tubulin pAb-HRP-DirecT
M175-3	Anti- α -Tubulin mAb
PM053	Anti- β -Actin pAb
PM053-7	Anti- β -Actin pAb-HRP-DirecT
M177-3	Anti- β -Actin mAb