

Product Information

Anti-DDX6 antibody, Mouse monoclonal

Clone DDX6-34, purified from hybridoma cell culture

Product Number **SAB4200837**

Product Description

Monoclonal Anti-DDX6 antibody (mouse IgG1 isotype) is derived from the DDX6-34 hybridoma, produced by the fusion of mouse myeloma cells and splenocytes from a mouse immunized with partial recombinant protein corresponding to the N-terminal region of human DDX6 (GeneID: 1656) as immunogen. The isotype is determined by ELISA using Mouse Monoclonal Antibody Isotyping Reagents (Product Number ISO2). The antibody is purified from culture supernatant of hybridoma cells.

Monoclonal Anti-DDX6 antibody specifically recognizes DDX6 of human, mouse, monkey, canine, and bovine origin. The antibody may be used in various immunochemical techniques including immunoblotting (~54 kDa) and immunofluorescence. Detection of the DDX6 band by immunoblotting is specifically inhibited by the immunogen.

Probable ATP-dependent RNA helicase DDX6 also known as DEAD box protein 6 or Oncogene RCK/p54, is a conserved member of the DEAD-box RNA helicase family. DDX6 plays a central role in P-body assembly in mammals and its depletion prevents P-body assembly leading to P-bodies disappearance.¹ DDX6 coordinates RNA and ATP helicase binding activities and binds along the mRNA. DDX6 sequence specific binding at the mRNA 5' end activates recruitment of the decapping complex, thus coupling translational repression and mRNA degradation.¹⁻²

DDX6 is considered to be a P-bodies marker due to its mediating role between translational repression and P-bodies formation and to its interaction with Ago2 and the RISC complex that also mediates translational silencing by miRNAs.¹⁻⁴

Viruses like Hepatitis C virus (HCV) or West Nile virus (WNV) utilize the host cell DDX6 to promote virus infection by recruiting it to the viral replication sites where it is involved in stabilization of the viral genome and the shift between translation and replication.^{2,5-6}

DDX6 was reported to be overexpressed in colorectal adenocarcinomas, gastric cancer, and in most malignant cell lines.⁷⁻⁹ It was suggested that DDX6 acted as an upstream cancerous enhancer through RNA-binding of *HER2* and *FGFR2* mRNAs that positively regulates post-transcriptional processes in cancer cells.⁷

Reagent

Supplied as a solution in 0.01 M phosphate buffered saline, pH 7.4, containing 15 mM sodium azide as a preservative.

Antibody Concentration: ~1.0 mg/mL

Precautions and Disclaimer

For R&D use only. Not for drug, household, or other uses. Please consult the Safety Data Sheet for information regarding hazards and safe handling practices.

Storage/Stability

For continuous use, store at 2–8 °C for up to one month. For extended storage, freeze in working aliquots. Repeated freezing and thawing is not recommended. If slight turbidity occurs upon prolonged storage, clarify the solution by centrifugation before use. Working dilution samples should be discarded if not used within 12 hours.

Product Profile

Immunoblotting: a working concentration of 1-2 µg/mL is recommended using human HeLa whole cell extract.

Immunofluorescence: a working concentration of 10-20 µg/mL is recommended using human U2OS cells.

Note: In order to obtain best results in various techniques and preparations, it is recommended to determine optimal working dilutions by titration test.

References

1. Ernoult-Lange, M. et al., *RNA*, **18**, 1702-15 (2012).
2. Biegel, J.M. et al., *Virology*, **507**, 231-241 (2017).
3. Kami, D. et al., *PLoS One*, **13**, e0203708 (2018).
4. Huang, L. et al., *J. Biol. Chem.*, **286**, 24219-30 (2011).
5. Chahar, H.S. et al., *Virology*, **436**, 1-7 (2013).
6. Ostareck, D.H. et al., *Wiley Interdiscip. Rev. RNA*, **5**, 659-78 (2014).
7. Tajirika, T. et al., *Int. J. Mol. Sci.*, **19**, pii: E2005 (2018).
8. Taniguchi, K. et al., *Mol. Carcinog.*, **57**, 579-589 (2018).
9. Abdelhaleem, M., *Biochim. Biophys. Acta*, **1704**, 37-46 (2004).

VS,DR,OKF,MAM 06/19-1