



## **Anti- DDX58 (ATP-dependent RNA helicase DDX58) Phospho- Polyclonal Antibody**

**Category:** Phospho-Polyclonal Antibody

**Catalog #:** Phospho-AB3D222(Phospho Site: 170T)

**Antigen Synonym:** DEAD-box protein 58; RIG-1 (Retinoic acid-inducible gene 1 protein)

**Species Reactivity:** Human

### **Immunogen/Specificity:**

Polyclonal antibody produced in rabbits immunizing with a synthetic peptide corresponding to N-terminal residues of human DDX58 (ATP-dependent RNA helicase DDX58)

**Description:** DDX58 (ATP-dependent RNA helicase DDX58) is involved in innate immune defense against viruses. Upon interaction with intracellular dsRNA produced during viral replication, triggers a transduction cascade involving MAVS/IPS1, which results in the activation of NF-kappa-B, IRF3 and IRF7 and the induction of the expression of antiviral cytokines such as IFN-beta and RANTES (CCL5). Essential for the production of interferons in response to RNA viruses including paramyxoviruses, influenza viruses, Japanese encephalitis virus and HCV.

DDX58 (ATP-dependent RNA helicase DDX58) is maintained as a monomer in an autoinhibited state. Upon viral dsRNA binding and conformation shift, homomultimerizes and interacts with MAVS.

Interacts with DHX58/LGP2, IKBKE, TBK1 and TMEM173/STING. DDX58 (ATP-dependent RNA helicase DDX58) is present in vascular smooth cells at protein level.

DDX58 belongs to the helicase family and contains 2 CARD domains, 1 helicase ATP-binding domain and 1 helicase C-terminal domain.

### **Reference:**

Imaizumi,T., et al, *Biochem. Biophys. Res. Commun.* 292 (1), 274-279 (2002)

Cui,X.F., et al, *Biochem. Cell Biol.* 82 (3), 401-405 (2004)

Imaizumi,T., et al, *Life Sci.* 75 (10), 1171-1180 (2004)

Yoneyama,M., et al, *Nat. Immunol.* 5 (7), 730-737 (2004)

Seth,R.B., et al, *Cell* 122 (5), 669-682 (2005)

Huang,J., et al, *EMBO J.* 24 (23), 4018-4028 (2005)

Sumpter,R. Jr., et al, *J. Virol.* 79 (5), 2689-2699 (2005)

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