



DDX58 Recombinant Monoclonal Antibody

Product Code	CSB-RA207378A0HU
Storage	Upon receipt, store at -20°C or -80°C. Avoid repeated freeze.
Uniprot No.	O95786
Immunogen	A synthesized peptide derived from human DDX58
Species Reactivity	Human
Tested Applications	ELISA, IHC; Recommended dilution: IHC:1:50-1:200
Relevance	Innate immune receptor which acts as a cytoplasmic sensor of viral nucleic acids and plays a major role in sensing viral infection and in the activation of a cascade of antiviral responses including the induction of type I interferons and proinflammatory cytokines. Its ligands include: 5'-triphosphorylated ssRNA and dsRNA and short dsRNA (<1 kb in length). In addition to the 5'-triphosphate moiety, blunt-end base pairing at the 5'-end of the RNA is very essential. Overhangs at the non-triphosphorylated end of the dsRNA RNA have no major impact on its activity. A 3'overhang at the 5'triphosphate end decreases and any 5'overhang at the 5' triphosphate end abolishes its activity. Upon ligand binding it associates with mitochondria antiviral signaling protein (MAVS/IPS1) which activates the IKK-related kinases: TBK1 and IKBKE which phosphorylate interferon regulatory factors: IRF3 and IRF7 which in turn activate transcription of antiviral immunological genes, including interferons (IFNs); IFN-alpha and IFN-beta. Detects both positive and negative strand RNA viruses including members of the families Paramyxoviridae: Human respiratory syncytial virus and measles virus (MeV), Rhabdoviridae: vesicular stomatitis virus (VSV), Orthomyxoviridae: influenza A and B virus, Flaviviridae: Japanese encephalitis virus (JEV), hepatitis C virus (HCV), dengue virus (DENV) and west Nile virus (WNV). It also detects rotavirus and reovirus. Also involved in antiviral signaling in response to viruses containing a dsDNA genome such as Epstein-Barr virus (EBV). Detects dsRNA produced from non-self dsDNA by RNA polymerase III, such as Epstein-Barr virus-encoded RNAs (EBERs). May play important roles in granulocyte production and differentiation, bacterial phagocytosis and in the regulation of cell migration.
Form	Liquid
Conjugate	Non-conjugated
Storage Buffer	Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Purification Method	Affinity-chromatography
Isotype	Rabbit IgG
Clonality	Monoclonal
Product Type	Recombinant Antibody
Immunogen Species	Homo sapiens (Human)

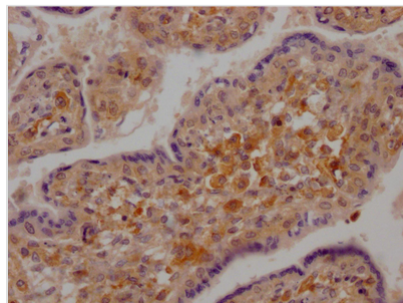


Research Area Epigenetics and Nuclear Signaling; Immunology

Gene Names DDX58

Clone No. 7F6

Image



IHC image of CSB-RA207378A0HU diluted at 1:100 and staining in paraffin-embedded human placenta tissue performed on a Leica BondTM system. After dewaxing and hydration, antigen retrieval was mediated by high pressure in a citrate buffer (pH 6.0). Section was blocked with 10% normal goat serum 30min at RT. Then primary antibody (1% BSA) was incubated at 4? overnight. The primary is detected by a Goat anti-rabbit IgG polymer labeled by HRP and visualized using 0.05% DAB.

Description

DDX58 codes for RIG-I, which preferentially binds to short dsRNA sequences with 5'-phosphates. RIG-I has a very low threshold of activation, and the presence of just 20 suitable dsRNA ligands is sufficient to stimulate RIG-I activation and signaling. RIG-I signaling via MAVS not only leads to the induction of type I IFN responses via TBK1 and IRF7/8, but it also activates caspase-8-dependent apoptosis, preferentially in tumor cells. Furthermore, RIG-I was also found to mediate MAVS-independent inflammasome activation, specifically in the context of viral infection. RIG-I is crucial to the specific innate response to IAV infection.

This recombinant DDX58 antibody was developed with the Single B cell platform. The main process included identification and isolation of single B cells; amplification and cloning of DDX58 antibody gene; expression, screening, and identification of antibody specificity. And this DDX58 antibody has been validated in ELISA, IHC.