abcam

Product datasheet

Anti-RIG-I/DDX58 antibody [EPR18629] - BSA and Azide free ab240230

KO VALIDATED Recombinant RabMAb

4 Images

Overview

Product name	Anti-RIG-I/DDX58 antibody [EPR18629] - BSA and Azide free
Description	Rabbit monoclonal [EPR18629] to RIG-I/DDX58 - BSA and Azide free
Host species	Rabbit
Tested applications	**Suitable for:** WB, IP
Species reactivity	**Reacts with:** Human
Immunogen	Recombinant fragment. This information is proprietary to Abcam and/or its suppliers.
Positive control	WB: A549, 293, HeLa and Jurkat whole cell lysates; Human fetal kidney and stomach lysates. IP: Jurkat whole cell lysate.
General notes	ab240230 is the carrier-free version of **ab180675**. Our **carrier-free** antibodies are typically supplied in a PBS-only formulation, purified and free of BSA, sodium azide and glycerol. The carrier-free buffer and high concentration allow for increased conjugation efficiency. This conjugation-ready format is designed for use with fluorochromes, metal isotopes, oligonucleotides, and enzymes, which makes them ideal for antibody labelling, functional and cell-based assays, flow-based assays (e.g. mass cytometry) and Multiplex Imaging applications. Use our **conjugation kits** for antibody conjugates that are ready-to-use in as little as 20 minutes with <1 minute hands-on-time and 100% antibody recovery: available for fluorescent dyes, HRP, biotin and gold. This product is compatible with the Maxpar® Antibody Labeling Kit from Fluidigm, without the need for antibody preparation. Maxpar® is a trademark of Fluidigm Canada Inc. This product is a recombinant monoclonal antibody, which offers several advantages including: - High batch-to-batch consistency and reproducibility - Improved sensitivity and specificity - Long-term security of supply - Animal-free production For more information **see here**. Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to **RabMAb® patents**.

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C. Do Not Freeze.
Storage buffer	pH: 7.2 Constituent: PBS
Carrier free	Yes
Purity	Protein A purified
Clonality	Monoclonal
Clone number	EPR18629
Isotype	IgG

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab240230 in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

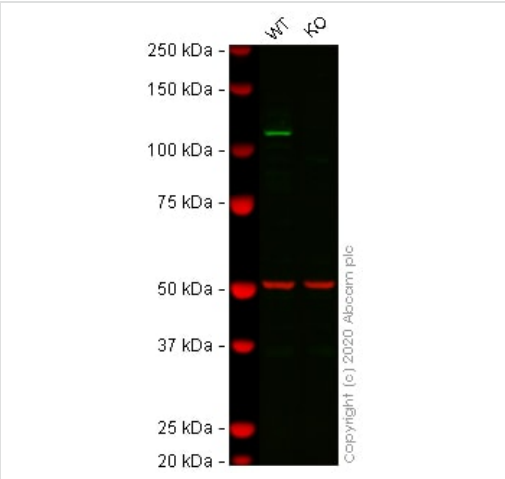
Application	Abreviews	Notes
WB		Use at an assay dependent concentration. Detects a band of approximately 107 kDa (predicted molecular weight: 107 kDa).
IP		Use at an assay dependent concentration.

Target

Function	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). Detects dsRNA produced from non-self dsDNA by RNA polymerase III, such as Epstein-Barr virus-encoded RNAs (EBERs). Essential for the production of interferons in response to RNA viruses including paramyxoviruses, influenza viruses, Japanese encephalitis virus and HCV.
Tissue specificity	Present in vascular smooth cells (at protein level).
Sequence similarities	Belongs to the helicase family. Contains 2 CARD domains. Contains 1 helicase ATP-binding domain. Contains 1 helicase C-terminal domain.
Domain	The repressor domain controls homomultimerization and interaction with MAVS. The helicase domain is responsible for dsRNA recognition. The 2 CARD domains are responsible for interaction with and signaling through MAVS. The second CARD domain is the primary site for 'Lys-63'-linked ubiquitination.
Post-translational modifications	Isgylated. Conjugated to ubiquitin-like protein ISG15 upon IFN-beta stimulation. Ubiquitinated. Undergoes 'Lys-63'-linked ubiquitination. Lys-172 is the critical site for TRIM25-

	mediated ubiquitination, for MAVS binding and to induce anti-viral signal transduction. Lys-154, Lys-164 and Lys-172 are critical sites for RNF135-mediated ubiquitination. Deubiquitinated by CYLD, a protease that selectively cleaves 'Lys-63'-linked ubiquitin chains.
Cellular localization	Cytoplasm. Colocalized with TRIM25 at cytoplasmic perinuclear bodies.

Images



Western blot - Anti-RIG-I/DDX58 antibody [EPR18629] - BSA and Azide free (ab240230)

All lanes : Anti-RIG-I/DDX58 antibody [EPR18629] (**ab180675**) at 1/1000 dilution

Lane 1 : Wild-type A549 cell lysate
Lane 2 : DDX58 knockout A549 cell lysate

Lysates/proteins at 20 µg per lane.

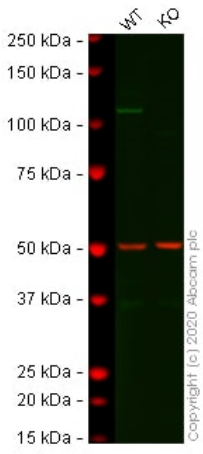
Performed under reducing conditions.

Predicted band size: 107 kDa
Observed band size: 107 kDa

This data was developed using the same antibody clone in a different buffer formulation (**ab180675**).

Lanes 1 - 2: Merged signal (red and green). Green - **ab180675** observed at 107 kDa. Red - loading control **ab7291** (Mouse anti-Alpha Tubulin [DM1A]) observed at 55kDa.

ab180675 was shown to react with DDX58 in A549 wild-type cells in western blot with loss of signal observed in DDX58 knockout cell line **ab267117** (DDX58 knockout cell lysate **ab257917**). Wild-type and DDX58 knockout A549 cell lysates were subjected to SDS-PAGE. Membranes were blocked in 3% milk in TBS-T (0.1% Tween®) before incubation with **ab180675** and **ab7291** (Mouse anti-Alpha Tubulin [DM1A]) overnight at 4°C at a 1 in 1000 dilution and a 1 in 20000 dilution respectively. Blots were incubated with Goat anti-Rabbit IgG H&L (IRDye® 800CW) preabsorbed (**ab216773**) and Goat anti-Mouse IgG H&L (IRDye® 680RD) preabsorbed (**ab216776**) secondary antibodies at 1 in 20000 dilution for 1 hour at room temperature before imaging.



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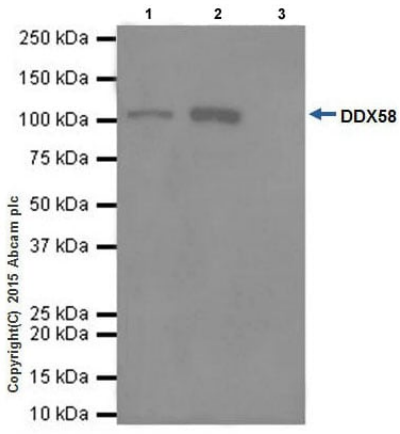
ab180675 was shown to react with DDX58 in A549 wild-type cells in western blot with loss of signal observed in DDX58 knockout cell line **ab267116** (DDX58 knockout cell lysate **ab257916**). Wild-type and DDX58 knockout A549 cell lysates were subjected to SDS-PAGE. Membranes were blocked in 3% milk in TBS-T (0.1% Tween®) before incubation with **ab180675** and **ab7291** (Mouse anti-Alpha Tubulin [DM1A]) overnight at 4°C at a 1 in 1000 dilution and a 1 in 20000 dilution respectively. Blots were incubated with Goat anti-Rabbit IgG H&L (IRDye® 800CW) preabsorbed (**ab216773**) and Goat anti-Mouse IgG H&L (IRDye® 680RD) preabsorbed (**ab216776**) secondary antibodies at 1 in 20000 dilution for 1 hour at room temperature before imaging.

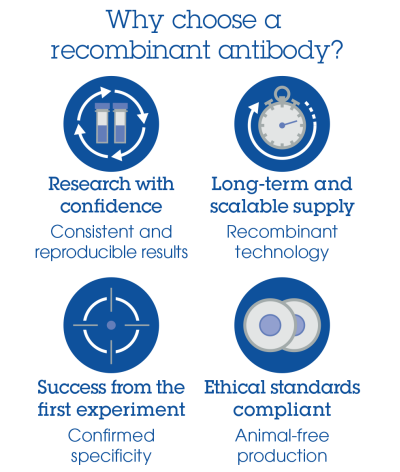


Immunoprecipitation - Anti-RIG-I/DDX58 antibody [EPR18629] - BSA and Azide free (ab240230)

RIG-I/DDX58 was immunoprecipitated from 1mg of Jurkat (Human T cell leukemia cells from peripheral blood) whole cell lysate with **ab180675** at 1/100 dilution. Western blot was performed from the immunoprecipitate using **ab180675** at 1/1000 dilution. VeriBlot for IP Detection Reagent (HRP) (**ab131366**), was used for detection at 1/10000 dilution.

Lane 1: Jurkat whole cell lysate 10ug (Input). Lane 2: **ab180675** IP in Jurkat whole cell lysate. Lane 3: Rabbit monoclonal IgG (**ab172730**) instead of **ab180675** in Jurkat whole cell lysate. Blocking and dilution buffer and concentration: 5% NFDM/TBST. Exposure time: 30 seconds.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (**ab180675**).



Anti-RIG-I/DDX58 antibody [EPR18629] - BSA and Azide free (ab240230)

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