

DDX41 (C-3): sc-166225

BACKGROUND

DDX41 (probable ATP-dependent RNA helicase DDX41, DEAD box protein abstract homolog) is a 622 amino acid protein encoded by the human gene DDX41. DDX41 belongs to the DEAD box helicase family (DDX41 subfamily) and contains one CCHC-type zinc finger, one helicase ATP-binding domain and one helicase C-terminal domain. DDX41 is required during posttranscriptional gene expression and is thought to be involved in pre-mRNA splicing. DDX41 is believed to be a probable ATP-dependent RNA helicase. RNA helicases are highly conserved enzymes that utilize the energy derived from NTP hydrolysis to modulate the structure of RNA. RNA helicases participate in all biological processes that involve RNA, including transcription, splicing and translation.

CHROMOSOMAL LOCATION

Genetic locus: DDX41 (human) mapping to 5q35.3; Ddx41 (mouse) mapping to 13 B1.

SOURCE

DDX41 (C-3) is a mouse monoclonal antibody raised against amino acids 111-206 mapping within an internal region of DDX41 of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin. Also available as TransCruz reagent for Gel Supershift and ChIP applications, sc-166225 X, 200 µg/0.1 ml.

DDX41 (C-3) is available conjugated to agarose (sc-166225 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-166225 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-166225 PE), fluorescein (sc-166225 FITC), Alexa Fluor® 488 (sc-166225 AF488), Alexa Fluor® 546 (sc-166225 AF546), Alexa Fluor® 594 (sc-166225 AF594) or Alexa Fluor® 647 (sc-166225 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-166225 AF680) or Alexa Fluor® 790 (sc-166225 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

DDX41 (C-3) is recommended for detection of DDX41 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for DDX41 siRNA (h): sc-91765, DDX41 siRNA (m): sc-142938, DDX41 shRNA Plasmid (h): sc-91765-SH, DDX41 shRNA Plasmid (m): sc-142938-SH, DDX41 shRNA (h) Lentiviral Particles: sc-91765-V and DDX41 shRNA (m) Lentiviral Particles: sc-142938-V.

DDX41 (C-3) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

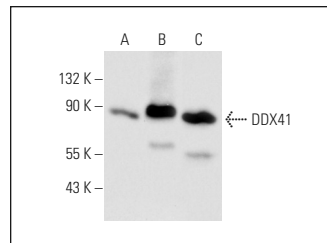
Molecular Weight of DDX41: 70 kDa.

Positive Controls: JAR cell lysate: sc-2276, MDA-MB-435S whole cell lysate: sc-364184 or DDX41 (h): 293 Lysate: sc-113244.

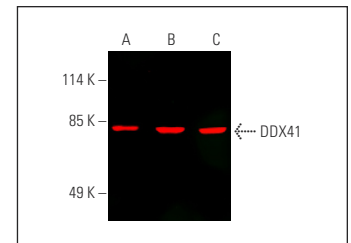
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



DDX41 (C-3): sc-166225. Western blot analysis of DDX41 expression in non-transfected 293: sc-110760 (A), human DDX41 transfected 293: sc-113244 (B) and JAR (C) whole cell lysates.



DDX41 (C-3): sc-166225. Near-infrared western blot analysis of DDX41 expression in JAR (A), MDA-MB-435S (B) and SW480 (C) whole cell lysates. Blocked with UltraCruz® Blocking Reagent: sc-516214. Detection reagent used: m-IgGκ BP-CFL 790: sc-516181.

SELECT PRODUCT CITATIONS

1. Tamassia, N., et al. 2012. IFN-β expression is directly activated in human neutrophils transfected with plasmid DNA and is further increased via TLR-4-mediated signaling. *J. Immunol.* 189: 1500-1509.
2. Zhang, Z., et al. 2013. The E3 ubiquitin ligase TRIM21 negatively regulates the innate immune response to intracellular double-stranded DNA. *Nat. Immunol.* 14: 172-178.
3. Yeh, Y.J., et al. 2020. Filgotinib suppresses HIV-1-driven gene transcription by inhibiting HIV-1 splicing and T cell activation. *J. Clin. Invest.* 130: 4969-4984.
4. Singh, R.S., et al. 2022. DDX41 is required for cGAS-STING activation against DNA virus infection. *Cell Rep.* 39: 110856.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.

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