

## DDI2 (A-3): sc-514004



The Power to Question

## BACKGROUND

DDI1 and DDI2 are ubiquitin receptor homologs of the *Saccharomyces cerevisiae* ddi1 protein, which is involved in regulation of the cell cycle and the late secretory pathway. DDI2 is a 399 amino acid protein that contains one ubiquitin-like domain and exists as three isoforms as a result of alternative splicing. The gene encoding DDI2 maps to human chromosome 1, the largest human chromosome which spans about 260 million base pairs and makes up 8% of the human genome. Other notable genes located on chromosome 1 include LMNA, which is associated with the rare aging disease Hutchinson-Gilford progeria, and the MUTYH gene, which is partially responsible for familial adenomatous polyposis. Stickler syndrome, Parkinsons, Gaucher disease and Usher syndrome.

## REFERENCES

1. Watson, M.L., et al. 1990. Genomic organization of the selectin family of leukocyte adhesion molecules on human and mouse chromosome 1. *J. Exp. Med.* 172: 263-272.
2. Blackwood, D.H., et al. 2001. Schizophrenia and affective disorders— cosegregation with a translocation at chromosome 1q42 that directly disrupts brain-expressed genes: clinical and P300 findings in a family. *Am. J. Hum. Genet.* 69: 428-433.
3. Weise, A., et al. 2005. New insights into the evolution of chromosome 1. *Cytogenet. Genome Res.* 108: 217-222.

## CHROMOSOMAL LOCATION

Genetic locus: DDI2 (human) mapping to 1p36.21; Ddi2 (mouse) mapping to 4 E1.

## SOURCE

DDI2 (A-3) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 78-102 within an internal region of DDI2 of human origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>2a</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

DDI2 (A-3) is available conjugated to agarose (sc-514004 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-514004 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-514004 PE), fluorescein (sc-514004 FITC), Alexa Fluor® 488 (sc-514004 AF488), Alexa Fluor® 546 (sc-514004 AF546), Alexa Fluor® 594 (sc-514004 AF594) or Alexa Fluor® 647 (sc-514004 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-514004 AF680) or Alexa Fluor® 790 (sc-514004 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-514004 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

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## APPLICATIONS

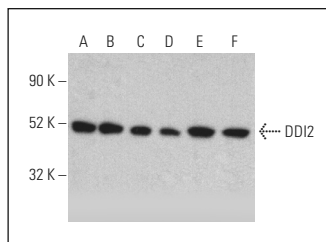
DDI2 (A-3) is recommended for detection of DDI2 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for DDI2 siRNA (h): sc-78585, DDI2 siRNA (m): sc-142918, DDI2 shRNA Plasmid (h): sc-78585-SH, DDI2 shRNA Plasmid (m): sc-142918-SH, DDI2 shRNA (h) Lentiviral Particles: sc-78585-V and DDI2 shRNA (m) Lentiviral Particles: sc-142918-V.

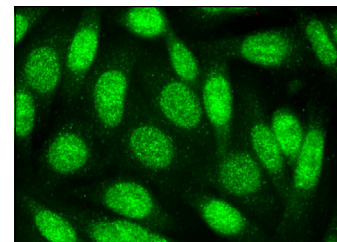
Molecular Weight of DDI2: 47/45/24 kDa.

Positive Controls: BYDP whole cell lysate: sc-364368, HeLa whole cell lysate: sc-2200 or Jurkat whole cell lysate: sc-2204.

## DATA



DDI2 (A-3) HRP: sc-514004 HRP. Direct western blot analysis of DDI2 expression in HeLa (A), Jurkat (B), Hep G2 (C), BYDP (D), C3H/10T1/2 (E) and 3611-RF (F) whole cell lysates.



DDI2 (A-3): sc-514004. Immunofluorescence staining of formalin-fixed SW480 cells showing nuclear localization.

## SELECT PRODUCT CITATIONS

1. Watanabe, M., et al. 2020. A substrate-trapping strategy to find E3 ubiquitin ligase substrates identifies Parkin and TRIM28 targets. *Commun. Biol.* 3: 592.
2. Qiu, Z., et al. 2022. LncRNA FAM13A-AS1 regulates proliferation and apoptosis of cervical cancer cells by targeting miRNA-205-3p/DDI2 axis. *J. Oncol.* 2022: 8411919.
3. Xu, X., et al. 2023. Decreased ubiquitin modifying enzyme A20 associated with hyper-responsiveness to ovalbumin challenge following intrauterine growth restriction. *Respir. Res.* 24: 50.
4. Ishii, K., et al. 2023.  $\alpha$ -tocotrienol and redox-silent analogs of vitamin E enhances bortezomib sensitivity in solid cancer cells through modulation of NFE2L1. *Int. J. Mol. Sci.* 24: 9382.

## 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.