

DET1 (F-2): sc-514348

BACKGROUND

DET1 (de-etiolated homolog 1), is a 550 amino acid highly conserved nuclear protein that is expressed in the ovary, some lymphoid organs and resting leukocytes. DET1 is a component of the E3 ubiquitin ligase Doublecortin DET1-COP1 complex, which is required for ubiquitination and degradation of proto-oncogenic transcription factor c-Jun. DET1 enhances the activity of several members of the UBC (Ub-conjugating enzyme) family and modulates Cul-4A functions. DET1 is involved in multiple plant developmental processes and acts as an essential negative regulator of photomorphogenesis.

REFERENCES

1. Pepper, A., et al. 1994. DET1, a negative regulator of light-mediated development and gene expression in arabidopsis, encodes a novel nuclear-localized protein. *Cell* 78: 109-116.
2. Benvenuto, G., et al. 2002. The photomorphogenesis regulator DET1 binds the amino-terminal tail of Histone H2B in a nucleosome context. *Curr. Biol.* 12: 1529-1534.
3. Davuluri, G.R., et al. 2004. Manipulation of DET1 expression in tomato results in photomorphogenic phenotypes caused by post-transcriptional gene silencing. *Plant J.* 40: 344-354.
4. Wertz, I.E., et al. 2004. Human de-etiolated-1 regulates c-Jun by assembling a CUL4A ubiquitin ligase. *Science* 303: 1371-1374.
5. Al Khateeb, W.M. and Schroeder, D.F. 2007. DDB2, DDB1A and DET1 exhibit complex interactions during *Arabidopsis* development. *Genetics* 176: 231-242.
6. Pick, E., et al. 2007. Mammalian DET1 regulates Cul4A activity and forms stable complexes with E2 ubiquitin-conjugating enzymes. *Mol. Cell. Biol.* 27: 4708-4719.

CHROMOSOMAL LOCATION

Genetic locus: DET1 (human) mapping to 15q25.3; Det1 (mouse) mapping to 7 D3.

SOURCE

DET1 (F-2) is a mouse monoclonal antibody raised against amino acids 1-300 mapping at the N-terminus of DET1 of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

DET1 (F-2) is available conjugated to agarose (sc-514348 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-514348 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-514348 PE), fluorescein (sc-514348 FITC), Alexa Fluor® 488 (sc-514348 AF488), Alexa Fluor® 546 (sc-514348 AF546), Alexa Fluor® 594 (sc-514348 AF594) or Alexa Fluor® 647 (sc-514348 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-514348 AF680) or Alexa Fluor® 790 (sc-514348 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

DET1 (F-2) is recommended for detection of DET1 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 DET1 siRNA (h): sc-89981, DET1 siRNA (m): sc-143015, DET1 shRNA Plasmid (h): sc-89981-SH, DET1 shRNA Plasmid (m): sc-143015-SH, DET1 shRNA (h) Lentiviral Particles: sc-89981-V and DET1 shRNA (m) Lentiviral Particles: sc-143015-V.

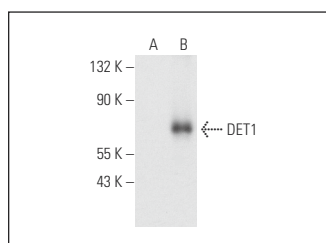
Molecular Weight of DET1: 64 kDa.

Positive Controls: DET1 (m): 293T Lysate: sc-126725.

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



DET1 (F-2): sc-514348. Western blot analysis of DET1 expression in non-transfected: sc-117752 (A) and mouse DET1 transfected: sc-126725 (B) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

1. Lin, H., et al. 2021. IP₆-assisted CSN-COP1 competition regulates a CRL4-ETV5 proteolytic checkpoint to safeguard glucose-induced Insulin secretion. *Nat. Commun.* 12: 2461.

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.