

# Act1 (D-11): sc-398161

## BACKGROUND

Members of the NF $\kappa$ B family of transcription factors are important in regulating the expression of various cellular and viral genes involved in immune and inflammatory responses, cell survival and stress responses. IL-1, TNF $\alpha$  and other related signaling pathways activate transcription factors through the activation of JNK. The NF $\kappa$ B signaling pathway converges with the signal-induced activation of JNK upstream of IKK. Isolated from the human embryonic kidney (HEK) 293 cell line, Act1 is an IKK $\gamma$ -associated protein that activates both NF $\kappa$ B and JNK constitutively. Act1, also designated NF $\kappa$ B activator 1 or CIKS (for connection to IKK and SAPK/JNK), may function as a coordinator between two stress-induced signaling pathways.

## CHROMOSOMAL LOCATION

Genetic locus: TRAF3IP2 (human) mapping to 6q21; Traf3ip2 (mouse) mapping to 10 B1.

## SOURCE

Act1 (D-11) is a mouse monoclonal antibody raised against amino acids 1-300 mapping near the N-terminus of Act1 of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Act1 (D-11) is available conjugated to agarose (sc-398161 AC), 500  $\mu$ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-398161 HRP), 200  $\mu$ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-398161 PE), fluorescein (sc-398161 FITC), Alexa Fluor<sup>®</sup> 488 (sc-398161 AF488), Alexa Fluor<sup>®</sup> 546 (sc-398161 AF546), Alexa Fluor<sup>®</sup> 594 (sc-398161 AF594) or Alexa Fluor<sup>®</sup> 647 (sc-398161 AF647), 200  $\mu$ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor<sup>®</sup> 680 (sc-398161 AF680) or Alexa Fluor<sup>®</sup> 790 (sc-398161 AF790), 200  $\mu$ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

## STORAGE

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

## APPLICATIONS

Act1 (D-11) is recommended for detection of Act1 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g 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 Act1 siRNA (h): sc-29634, Act1 siRNA (m): sc-29635, Act1 shRNA Plasmid (h): sc-29634-SH, Act1 shRNA Plasmid (m): sc-29635-SH, Act1 shRNA (h) Lentiviral Particles: sc-29634-V and Act1 shRNA (m) Lentiviral Particles: sc-29635-V.

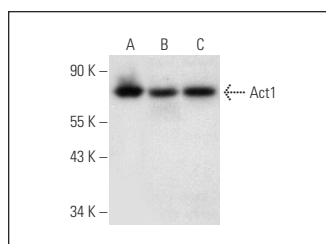
Molecular Weight of Act1: 72 kDa.

Positive Controls: HeLa nuclear extract: sc-2120, Hep G2 cell lysate: sc-2227 or Hep G2 nuclear extract: sc-364819.

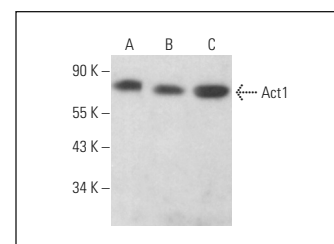
## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG $\kappa$  BP-HRP: sc-516102 or m-IgG $\kappa$  BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker<sup>™</sup> Molecular Weight Standards: sc-2035, UltraCruz<sup>®</sup> 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-IgG $\kappa$  BP-FITC: sc-516140 or m-IgG $\kappa$  BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz<sup>®</sup> Mounting Medium: sc-24941 or UltraCruz<sup>®</sup> Hard-set Mounting Medium: sc-359850.

## DATA



Act1 (D-11): sc-398161. Western blot analysis of Act1 expression in HeLa (A) and Hep G2 (B) nuclear extracts and Hep G2 whole cell lysate (C).



Act1 (D-11): sc-398161. Western blot analysis of Act1 expression in MCF7 (A), F9 (B) and Neuro-2A (C) whole cell lysates.

## SELECT PRODUCT CITATIONS

- Wang, M., et al. 2018. Gain-of-function mutation of card14 leads to spontaneous psoriasis-like skin inflammation through enhanced keratinocyte response to IL-17A. *Immunity* 49: 66-79.e5.
- Tanaka, H., et al. 2019. Phosphorylation-dependent regnase-1 release from endoplasmic reticulum is critical in IL-17 response. *J. Exp. Med.* 216: 1431-1449.
- Sun, L., et al. 2020. IL-10 dampens an IL-17-mediated periodontitis-associated inflammatory network. *J. Immunol.* 204: 2177-2191.
- Draberova, H., et al. 2020. Systematic analysis of the IL-17 receptor signalosome reveals a robust regulatory feedback loop. *EMBO J.* 39: e104202.
- Guo, W., et al. 2021. Ebosin ameliorates psoriasis-like inflammation of mice via miR-155 targeting tnfaip3 on IL-17 pathway. *Front. Immunol.* 12: 662362.
- He, R., et al. 2021. Identification of a long noncoding RNA TRAF3IP2-AS1 as key regulator of IL-17 signaling through the SRSF10-IRF1-Act1 axis in autoimmune diseases. *J. Immunol.* 206: 2353-2365.

## RESEARCH USE

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

Alexa Fluor<sup>®</sup> is a trademark of Molecular Probes, Inc., Oregon, USA