

Act1 (D-11): sc-398161



The Power to Question

BACKGROUND

Members of the NF κ 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 α and other related signaling pathways activate transcription factors through the activation of JNK. The NF κ 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 γ -associated protein that activates both NF κ B and JNK constitutively. Act1, also designated NF κ 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 μ g IgG $_1$ 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 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-398161 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-398161 PE), fluorescein (sc-398161 FITC), Alexa Fluor[®] 488 (sc-398161 AF488), Alexa Fluor[®] 546 (sc-398161 AF546), Alexa Fluor[®] 594 (sc-398161 AF594) or Alexa Fluor[®] 647 (sc-398161 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-398161 AF680) or Alexa Fluor[®] 790 (sc-398161 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

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 μ g per 100-500 μ 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.

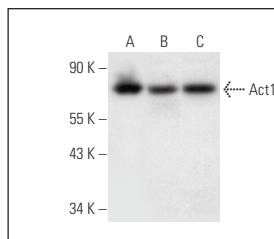
Positive Controls: HeLa nuclear extract: sc-2120, Hep G2 cell lysate: sc-2227 or Hep G2 nuclear extract: sc-364819.

STORAGE

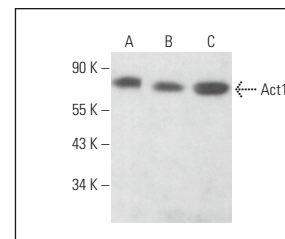
Store at 4[°] C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

RESEARCH USE

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

DATA

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



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.
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- 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.
- Chen, X., et al. 2022. IL-17-induced HIF1 α drives resistance to anti-PD-L1 via fibroblast-mediated immune exclusion. *J. Exp. Med.* 219: e20210693.
- Knizkova, D., et al. 2022. CMTM4 is a subunit of the IL-17 receptor and mediates autoimmune pathology. *Nat. Immunol.* 23: 1644-1652.
- Ni, Q., et al. 2024. LECs regulate neutrophil clearance through IL-17RC/CMTM4/NF- κ B axis at sites of inflammation or infection. *Mucosal Immunol.* 17: 723-738.
- Jiang, Z., et al. 2024. MLN4924 alleviates autoimmune myocarditis by promoting Act1 degradation and blocking Act1-mediated mRNA stability. *Int. Immunopharmacol.* 139: 112716.

PROTOCOLS

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

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