

HEXIM1 (D-8): sc-390059

BACKGROUND

Hexamethylene bis-acetamide inducible 1 (HEXIM1) and Hexamethylene bis-acetamide inducible 2 (HEXIM2) comprise a family of proteins which inhibit positive transcription elongation factor β (P-TEF β) through association with 7SK. P-TEF β is composed of a catalytic subunit, Cdk9, and either Cyclin T1 or T2 as a regulatory subunit. This complex regulates eukaryotic gene expression at the level of elongation. The C-terminal domains of HEXIM proteins interact directly with each other. Via these domains, HEXIM1 and HEXIM2 form stable homo- and hetero-oligomers, which may aid in the formation of the 7SK small nuclear ribonucleic acid particle. Despite their similar functions, HEXIM1 and HEXIM2 exhibit distinct expression patterns in various established cell lines and human tissues.

REFERENCES

- Byers, S.A., et al. 2005. HEXIM2, a HEXIM1-related protein, regulates positive transcription elongation factor β through association with 7SK. *J. Biol. Chem.* 280: 16360-16367.
- Yik, J.H., et al. 2005. Compensatory contributions of HEXIM1 and HEXIM2 in maintaining the balance of active and inactive positive transcription elongation factor b complexes for control of transcription. *J. Biol. Chem.* 280: 16368-16376.

CHROMOSOMAL LOCATION

Genetic locus: HEXIM1 (human) mapping to 17q21.31; Hexim1 (mouse) mapping to 11 E1.

SOURCE

HEXIM1 (D-8) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 7-29 at the N-terminus of HEXIM1 of human origin.

PRODUCT

Each vial contains 200 μ g IgG_{2b} 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-390059 X, 200 μ g/0.1 ml.

HEXIM1 (D-8) is available conjugated to agarose (sc-390059 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-390059 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-390059 PE), fluorescein (sc-390059 FITC), Alexa Fluor® 488 (sc-390059 AF488), Alexa Fluor® 546 (sc-390059 AF546), Alexa Fluor® 594 (sc-390059 AF594) or Alexa Fluor® 647 (sc-390059 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-390059 AF680) or Alexa Fluor® 790 (sc-390059 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-390059 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

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STORAGE

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

APPLICATIONS

HEXIM1 (D-8) is recommended for detection of HEXIM1 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

HEXIM1 (D-8) is also recommended for detection of HEXIM1 in additional species, including equine and porcine.

Suitable for use as control antibody for HEXIM1 siRNA (h): sc-60787, HEXIM1 siRNA (m): sc-60788, HEXIM1 shRNA Plasmid (h): sc-60787-SH, HEXIM1 shRNA Plasmid (m): sc-60788-SH, HEXIM1 shRNA (h) Lentiviral Particles: sc-60787-V and HEXIM1 shRNA (m) Lentiviral Particles: sc-60788-V.

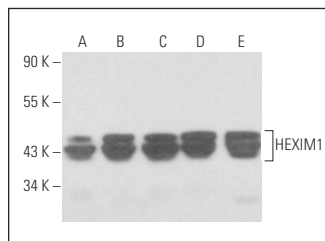
HEXIM1 (D-8) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight (predicted) of HEXIM1: 41 kDa.

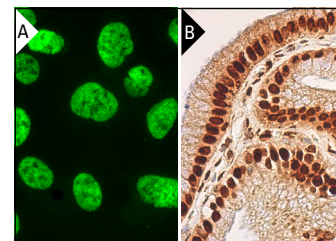
Molecular Weight (observed) of HEXIM1: 60-68 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, K-562 whole cell lysate: sc-2203 or Jurkat whole cell lysate: sc-2204.

DATA



HEXIM1 (D-8): sc-390059. Western blot analysis of HEXIM1 expression in HeLa (A), K-562 (B), Jurkat (C), Hep G2 (D) and F9 (E) whole cell lysates.



HEXIM1 (D-8): sc-390059. Immunofluorescence staining of formalin-fixed Hep G2 cells showing nuclear localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human gall bladder tissue showing nuclear staining of glandular cells (B).

SELECT PRODUCT CITATIONS

- Lee, S., et al. 2020. JMJD6 cleaves MePCE to release positive transcription elongation factor b (P-TEFb) in higher eukaryotes. *Elife* 9: e53930.
- Chintala, K., et al. 2024. The nuclear pore protein NUP98 impedes LTR-driven basal gene expression of HIV-1, viral propagation, and infectivity. *Front. Immunol.* 15: 1330738.

RESEARCH USE

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