

# HEXIM1 (E-7): sc-365413

## 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  $\beta$  (P-TEF $\beta$ ) through association with 7SK. P-TEF $\beta$  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  $\beta$  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  $\beta$  complexes for control of transcription. *J. Biol. Chem.* 280: 16368-16376.
- Li, Q., et al. 2005. Analysis of the large inactive P-TEF $\beta$  complex indicates that it contains one 7SK molecule, a dimer of HEXIM1 or HEXIM2, and two P-TEF $\beta$  molecules containing Cdk9 phosphorylated at threonine 186. *J. Biol. Chem.* 280: 28819-28826.
- Dulac, C., et al. 2005. Transcription-dependent association of multiple positive transcription elongation factor units to a HEXIM multimer. *J. Biol. Chem.* 280: 30619-30629.
- Fraldi, A., et al. 2005. Inhibition of Tat activity by the HEXIM1 protein. *Retrovirology* 2: 42.

## CHROMOSOMAL LOCATION

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

## SOURCE

HEXIM1 (E-7) is a mouse monoclonal antibody raised against amino acids 294-359 mapping at the C-terminus of HEXIM1 of human origin.

## PRODUCT

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

## 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.

## APPLICATIONS

HEXIM1 (E-7) 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  $\mu$ 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 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.

Molecular Weight (predicted) of HEXIM1: 41 kDa.

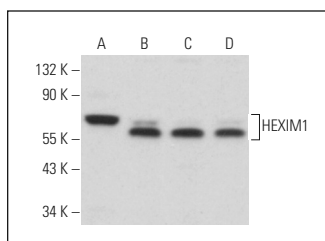
Molecular Weight (observed) of HEXIM1: 60-68 kDa.

Positive Controls: K-562 whole cell lysate: sc-2203, SK-N-MC whole cell lysate: sc-2237 or HeLa whole cell lysate: sc-2200.

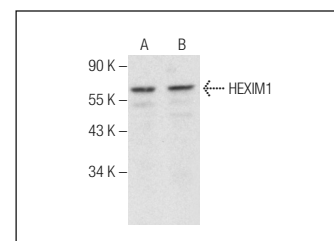
## RECOMMENDED SUPPORT REAGENTS

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™ 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-IgG $\kappa$  BP-FITC: sc-516140 or m-IgG $\kappa$  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



HEXIM1 (E-7): sc-365413. Western blot analysis of HEXIM1 expression in K-562 (A), F9 (B), RAW 264.7 (C) and Neuro-2A (D) whole cell lysates.



HEXIM1 (E-7): sc-365413. Western blot analysis of HEXIM1 expression in HeLa (A) and SK-N-MC (B) whole cell lysates.

## SELECT PRODUCT CITATIONS

- Coude, M.M., et al. 2015. BET inhibitor OTX015 targets BRD2 and BRD4 and decreases c-Myc in acute leukemia cells. *Oncotarget* 6: 17698-17712.



See **HEXIM1 (D-8): sc-390059** for HEXIM1 antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.