SANTA CRUZ BIOTECHNOLOGY, INC.

HEXIM1 (G-10): sc-398479

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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-TEFβ) through association with 7SK. P-TEFβ 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

1. 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.
2. 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.
3. Li, Q., et al. 2005. Analysis of the large inactive P-TEFβ complex indicates that it contains one 7SK molecule, a dimer of HEXIM1 or HEXIM2, and two P-TEFβ molecules containing Cdk9 phosphorylated at threonine 186. J. Biol. Chem. 280: 28819-28826.

CHROMOSOMAL LOCATION

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

SOURCE

HEXIM1 (G-10) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 207-230 within an internal region of HEXIM1 of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} 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-398479 X, 200 µg/0.1 ml.

HEXIM1 (G-10) is available conjugated to agarose (sc-398479 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-398479 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-398479 PE), fluorescein (sc-398479 FITC), Alexa Fluor® 488 (sc-398479 AF488), Alexa Fluor® 546 (sc-398479 AF546), Alexa Fluor® 594 (sc-398479 AF594) or Alexa Fluor® 647 (sc-398479 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-398479 AF680) or Alexa Fluor® 790 (sc-398479 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-398479 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

HEXIM1 (G-10) 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 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).

HEXIM1 (G-10) is also recommended for detection of HEXIM1 in additional species, including equine, canine, bovine 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.

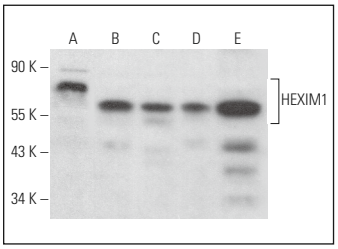
HEXIM1 (G-10) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight (predicted) of HEXIM1: 41 kDa.

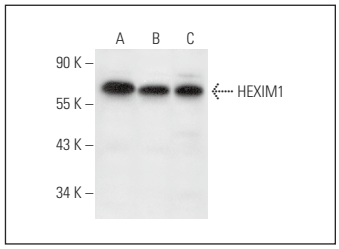
Molecular Weight (observed) of HEXIM1: 60-68 kDa.

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

DATA



HEXIM1 (G-10): sc-398479. Western blot analysis of HEXIM1 expression in HeLa (**A**), C2C12 (**B**), EOC 20 (**C**), L6 (**D**) and C6 (**E**) whole cell lysates.



HEXIM1 (G-10): sc-398479. Western blot analysis of HEXIM1 expression in HeLa (**A**), K-562 (**B**) and Jurkat (**C**) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Huang, M., et al. 2016. Autophagy mediates proteolysis of NPM1 and HEXIM1 and sensitivity to BET inhibition in AML cells. Oncotarget 7: 74917-74930.
2. Gamage, A.M., et al. 2017. Anti-cancer drug HMBA acts as an adjuvant during intracellular bacterial infections by inducing type I IFN through STING. J. Immunol. 199: 2491-2502.

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.