SANTA CRUZ BIOTECHNOLOGY, INC.

HEATR1 (B-11): sc-390445

BACKGROUND

HEATR1 (HEAT repeat containing 1), also known as BAP28, is a 2,144 amino acid nuclear protein involved in nucleolar processing of pre-18S ribosomal RNA. HEATR1 is a member of the HEATR1/UTP10 family and contains one HEAT repeat. The gene encoding HEATR1 is located on human chromosome 1, which spans 260 million base pairs, contains over 3,000 genes and comprises nearly 8% of the human genome. Chromosome 1 houses a large number of disease-associated genes, including those that are involved in familial adenomatous polyposis, Stickler syndrome, Parkinson's disease, Gaucher disease, schizophrenia and Usher syndrome. Aberrations in chromosome 1 are found in a variety of cancers, including head and neck cancer, malignant melanoma and multiple myeloma.

CHROMOSOMAL LOCATION

Genetic locus: HEATR1 (human) mapping to 1q43; Heatr1 (mouse) mapping to 13 A1.

SOURCE

HEATR1 (B-11) is a mouse monoclonal antibody raised against amino acids 1845-2144 mapping at the C-terminus of HEATR1 of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

HEATR1 (B-11) is available conjugated to agarose (sc-390445 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-390445 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-390445 PE), fluorescein (sc-390445 FITC), Alexa Fluor® 488 (sc-390445 AF488), Alexa Fluor® 546 (sc-390445 AF546), Alexa Fluor® 594 (sc-390445 AF594) or Alexa Fluor® 647 (sc-390445 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-390445 AF680) or Alexa Fluor® 790 (sc-390445 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

HEATR1 (B-11) is recommended for detection of HEATR1 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).

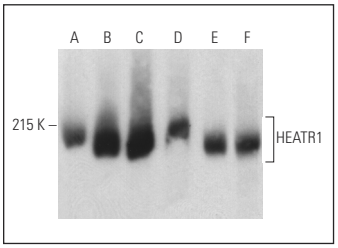
Suitable for use as control antibody for HEATR1 siRNA (h): sc-88457, HEATR1 siRNA (m): sc-145920, HEATR1 shRNA Plasmid (h): sc-88457-SH, HEATR1 shRNA Plasmid (m): sc-145920-SH, HEATR1 shRNA (h) Lentiviral Particles: sc-88457-V and HEATR1 shRNA (m) Lentiviral Particles: sc-145920-V.

Positive Controls: Hep G2 nuclear extract: sc-364819, MDA-MB-231 cell lysate: sc-2232 or HeLa nuclear extract: sc-2120.

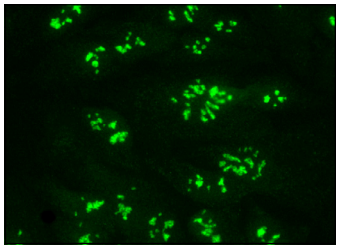
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ 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-IgGκ BP-FITC: sc-516140 or m-IgGκ 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



HEATR1 (B-11): sc-390445. Western blot analysis of HEATR1 expression in Hep G2 (**A**), HeLa (**B**), K-562 (**C**) and HL-60 (**D**) nuclear extracts and MDA-MB-231 (**E**) and AML-193 (**F**) whole cell lysates. Detection reagent used: m-IgG_1 BP-HRP: sc-525408.



HEATR1 (B-11): sc-390445. Immunofluorescence staining of formalin-fixed Hep G2 cells showing nucleolar localization.

SELECT PRODUCT CITATIONS

1. Yao, R.W., et al. 2019. Nascent pre-rRNA sorting via phase separation drives the assembly of dense fibrillar components in the human nucleolus. Mol. Cell 76: 767-783.
2. Nakamura, A., et al. 2021. HEATR1, a novel interactor of Pontin/Reptin, stabilizes Pontin/Reptin and promotes cell proliferation of oral squamous cell carcinoma. Biochem. Biophys. Res. Commun. 557: 294-301.
3. Diaz, L.R., et al. 2024. Ribogenesis boosts controlled by HEATR1-MYC interplay promote transition into brain tumour growth. EMBO Rep. 25: 168-197.

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.

PROTOCOLS

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