SANTA CRUZ BIOTECHNOLOGY, INC.

EWS (C-9): sc-48404

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

EWS is a nuclear RNA-binding protein. As a result of chromosome translocation, the EWS gene is fused to a variety of transcription factors, including ATF-1, in human neoplasias. In the Ewing family of tumors, the N-terminal domain of EWS is fused to the DNA-binding domain of various ETS transcription factors, including Fli-1, Erg, ETV1, E1AF and FEV. The EWS/Fli-1 chimeric protein acts as a more potent transcriptional activator than Fli-1 and can promote cell transformation. Two functional regions have been identified in EWS. An amino-terminal region (domain A) has little transactivation activity, but transforms efficiently when fused to Fli-1. A distal region (domain B) shows transactivation activity, but transforms less efficiently when fused to Fli-1.

CHROMOSOMAL LOCATION

Genetic locus: EWSR1 (human) mapping to 22q12.2; Ewsr1 (mouse) mapping to 11 A1.

SOURCE

EWS (C-9) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 2-43 at the N-terminus of EWS 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.

EWS (C-9) is available conjugated to agarose (sc-48404 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-48404 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-48404 PE), fluorescein (sc-48404 FITC), Alexa Fluor® 488 (sc-48404 AF488), Alexa Fluor® 546 (sc-48404 AF546), Alexa Fluor® 594 (sc-48404 AF594) or Alexa Fluor® 647 (sc-48404 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-48404 AF680) or Alexa Fluor® 790 (sc-48404 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-48404 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

EWS (C-9) is recommended for detection of EWS of mouse, rat and human origin by Western Blotting (starting dilution 1:200, 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), 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).

EWS (C-9) is also recommended for detection of EWS in additional species, including canine, bovine, porcine and avian.

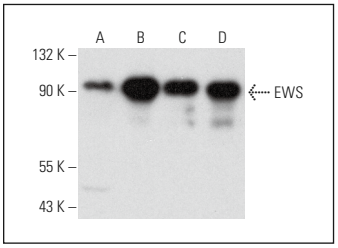
Suitable for use as control antibody for EWS siRNA (h): sc-35347, EWS siRNA (m): sc-35348, EWS shRNA Plasmid (h): sc-35347-SH, EWS shRNA Plasmid (m): sc-35348-SH, EWS shRNA (h) Lentiviral Particles: sc-35347-V and EWS shRNA (m) Lentiviral Particles: sc-35348-V.

Molecular Weight of EWS: 90 kDa.

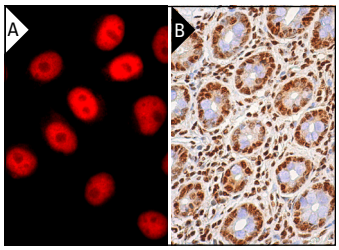
STORAGE

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

DATA



EWS (C-9): sc-48404. Western blot analysis of EWS expression in CTLL-2 (**A**), NIH/3T3 (**B**), I-11.15 (**C**) and NRK (**D**) whole cell lysates.



EWS (C-9): sc-48404. Immunofluorescence detection of EWS in formalin-fixed HeLa cells showing nuclear localization. Detection reagent used: m-IgGκ BP-PE: sc-516141 (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human colon tissue showing nuclear staining of glandular cells and endothelial cells (**B**).

SELECT PRODUCT CITATIONS

1. Embree, L.J., et al. 2009. Ewing sarcoma fusion protein EWSR1/FLI1 interacts with EWSR1 leading to mitotic defects in zebrafish embryos and human cell lines. Cancer Res. 69: 4363-4371.
2. Sankar, S., et al. 2013. EWS and RE1-silencing transcription factor inhibit neuronal phenotype development and oncogenic transformation in Ewing sarcoma. Genes Cancer 4: 213-223.
3. Roberts, J.M., et al. 2014. Splicing factor TRA2B is required for neural progenitor survival. J. Comp. Neurol. 522: 372-392.
4. Merkes, C., et al. 2015. Ewing sarcoma ewsa protein regulates chondrogenesis of Meckel's cartilage through modulation of Sox9 in zebrafish. PLoS ONE 10: e0116627.
5. Wang, Y.L., et al. 2016. EWSR1 regulates mitosis by dynamically influencing microtubule acetylation. Cell Cycle 15: 2202-2215.
6. Wang, Y., et al. 2020. A prion-like domain in transcription factor EBF1 promotes phase separation and enables B cell programming of progenitor chromatin. Immunity 53: 1151-1167.e6.
7. Ahmed, N.S., et al. 2021. Fusion protein EWS-FLI1 is incorporated into a protein granule in cells. RNA 27: 920-932.
8. Zhang, T., et al. 2022. Acetylation dependent translocation of EWSR1 regulates CHK2 alternative splicing in response to DNA damage. Oncogene 41: 3694-3704.
9. Gawade, K., et al. 2023. FUS regulates a subset of snoRNA expression and modulates the level of rRNA modifications. Sci. Rep. 13: 2974.

RESEARCH USE

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