

EWS (C-9): sc-48404

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 IgG₁ 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.

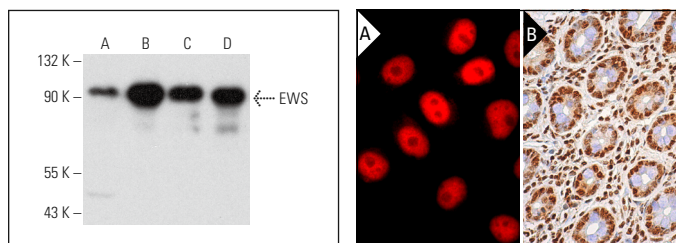
Suitable for use as control antibody for EWS siRNA (h): sc-35347, EWS siRNA (m): sc-35348, EWS shRNA Plasmid (h): sc-35347-SH, EWS shRNA Plasmid (m): sc-35348-SH, EWS shRNA (h) Lentiviral Particles: sc-35347-V and EWS shRNA (m) Lentiviral Particles: sc-35348-V.

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

- 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.
- Blechingberg, J., et al. 2012. Characterization and expression analysis in the developing embryonic brain of the porcine FET family: FUS, EWS, and TAF15. *Gene* 493: 27-35.
- 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.
- Roberts, J.M., et al. 2014. Splicing factor TRA2B is required for neural progenitor survival. *J. Comp. Neurol.* 522: 372-392.
- 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.
- Loganathan, S.N., et al. 2016. BET bromodomain inhibitors suppress EWS-FLI1-dependent transcription and the IGF1 autocrine mechanism in Ewing sarcoma. *Oncotarget* 7: 43504-43517.
- Wang, Y.L., et al. 2016. EWSR1 regulates mitosis by dynamically influencing microtubule acetylation. *Cell Cycle* 15: 2202-2215.
- 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.
- Ahmed, N.S., et al. 2021. Fusion protein EWS-FLI1 is incorporated into a protein granule in cells. *RNA* 27: 920-932.

RESEARCH USE

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

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