SANTA CRUZ BIOTECHNOLOGY, INC.

EWS (G-5): sc-28327

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), that has little transactivation activity but transforms efficiently when fused to Fli-1, and a distal region (domain B), which shows transactivation activity but transforms less efficiently when fused to Fli-1.

REFERENCES

1. Delattre, O., et al. 1992. Gene fusion with an ETS DNA-binding domain caused by chromosome translocation in human tumours. Nature 359: 162-165.
2. May, W.A., et al. 1993. The Ewing's sarcoma EWS/Fli-1 fusion gene encodes a more potent transcriptional activator and is a more powerful transforming gene than Fli-1. Mol. Cell. Biol. 13: 7393-7398.

CHROMOSOMAL LOCATION

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

SOURCE

EWS (G-5) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 2-19 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 (G-5) is available conjugated to agarose (sc-28327 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-28327 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-28327 PE), fluorescein (sc-28327 FITC), Alexa Fluor® 488 (sc-28327 AF488), Alexa Fluor® 546 (sc-28327 AF546), Alexa Fluor® 594 (sc-28327 AF594) or Alexa Fluor® 647 (sc-28327 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-28327 AF680) or Alexa Fluor® 790 (sc-28327 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-28327 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

STORAGE

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

APPLICATIONS

EWS (G-5) is recommended for detection of EWS of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1,000), 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).

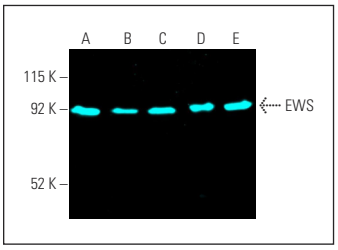
EWS (G-5) is also recommended for detection of EWS in additional species, including canine, bovine, porcine and avian.

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.

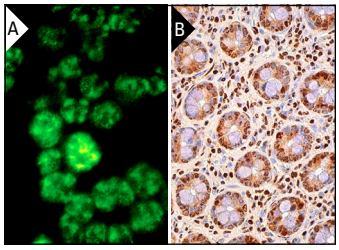
Molecular Weight of EWS: 90 kDa.

Positive Controls: K-562 whole cell lysate: sc-2203, Jurkat whole cell lysate: sc-2204 or F9 cell lysate: sc-2245.

DATA



EWS (G-5) Alexa Fluor® 647: sc-28327 AF647. Direct fluorescent western blot analysis of EWS expression in K-562 (**A**), F9 (**B**) and Jurkat (**C**) whole cell lysates, HeLa nuclear extract (**D**) and rat testis tissue extract (**E**). Blocked with UltraCruz® Blocking Reagent: sc-516214.



EWS (G-5): sc-28327. Immunofluorescence staining of methanol-fixed K-562 cells showing nuclear localization (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human colon tissue showing nuclear staining of glandular cells and interstitial cells (**B**).

SELECT PRODUCT CITATIONS

1. Todd, A.G., et al. 2010. Analysis of SMN-neurite granules: Core Cajal body components are absent from SMN-cytoplasmic complexes. Biochem. Biophys. Res. Commun. 397: 479-485.
2. Ratovitski, T., et al. 2023. Arginine methylation of RNA-binding proteins is impaired in Huntington's disease. Hum. Mol. Genet. 32: 3006-3025.
3. Tetter, S., et al. 2024. TAF15 amyloid filaments in frontotemporal lobar degeneration. Nature 625: 345-351.
4. Boulay, G., et al. 2024. EWS-WT1 fusion isoforms establish oncogenic programs and therapeutic vulnerabilities in desmoplastic small round cell tumors. Nat. Commun. 15: 7460.

RESEARCH USE

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