SANTA CRUZ BIOTECHNOLOGY, INC.

EWS (N-18): sc-6533

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 (N-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of EWS of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-6533 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

Available as TransCruz reagent for ChIP application, sc-6533 X, 200 µg/0.1 ml.

APPLICATIONS

EWS (N-18) 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

EWS (N-18) 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.

EWS (N-18) X TransCruz antibody is recommended for ChIP assays.

Molecular Weight of EWS: 90 kDa.

Positive Controls: K-562 whole cell lysate: sc-2203, C32 whole cell lysate: sc-2205 or EWS (h): 293 Lysate: sc-110794.

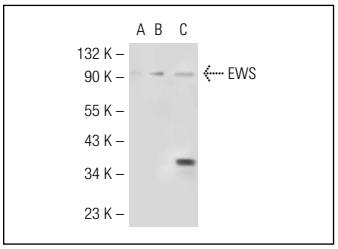
STORAGE

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

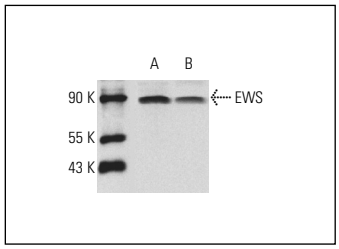
RESEARCH USE

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

DATA



EWS (N-18): sc-6533. Western blot analysis of EWS expression in non-transfected 293: sc-110760 (**A**), human EWS transfected 293: sc-110794 (**B**) and HeLa (**C**) whole cell lysates.



EWS (N-18): sc-6533. Western blot analysis of EWS expression in K-562 (**A**) and C32 (**B**) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Wang, M., et al. 1999. Regulatory role of mevalonate and N-linked glycosylation in proliferation and expression of the EWS/Fli-1 fusion protein in Ewing's sarcoma cells. Exp. Cell Res. 246: 38-46.
2. Sanchez-Prieto, R., et al. 1999. An association between viral genes and human oncogenic alterations: the adenovirus E1A induces the Ewing tumor fusion transcript EWS-FLI1. Nat. Med. 5: 1076-1079.
3. Olsen, R., et al. 2001. Phosphorylation of the EWS IQ domain regulates transcriptional activity of the EWS/ATF-1 and EWS/Fli-1 fusion proteins. Oncogene 20: 1756-1764.
4. Liu, Q., et al. 2001. Nasal CD56 positive small round cell tumors. Differential diagnosis of hematological, neurogenic, and myogenic neoplasms. Virchows Arch. 438: 271-279.
5. Matsui, Y., et al. 2003. COL11A2 collagen gene transcription is differentially regulated by EWS/Erg sarcoma fusion protein and wild-type Erg. J. Biol. Chem. 278: 11369-11375.
6. Liu, Y.N., et al. 2005. Regulatory mechanisms controlling human E-cadherin gene expression. Oncogene 24: 8277-8290.
7. Kikuchi, R., et al. 2007. Ewing's sarcoma fusion protein, EWS/Fli-1 and Fli-1 protein induce PLD2 but not PLD1 gene expression by binding to an Ets domain of 5' promoter. Oncogene 26: 1802-1810.
8. Amanchy, R., et al. 2008. Identification of c-Src tyrosine kinase substrates using mass spectrometry and peptide microarrays. J. Proteome Res. 7: 3900-3910.
9. Sumegi, J., et al. 2011. A novel t(4;22)(q31;q12) produces an EWSR1-SMARCA5 fusion in extraskeletal Ewing sarcoma/primitive neuroectodermal tumor. Mod. Pathol. 24: 333-342.

PROTOCOLS

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