EWS (h): 293 Lysate: sc-110794



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 iden-tified 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.

REFERENCES

- 1. Delattre, O., Zucman, J., Plougastel, B., Desmaze, C., Melot, T., Peter, M., Kovar, H., Joubert, I., de Jong, P., Rouleau, G., et al. 1992. Gene fusion with an ETS DNA-binding domain caused by chromosome translocation in human tumours. Nature 359: 162-165.
- May, W.A., Lessnick, S.L., Braun, B.S., Klemsz, M., Lewis, B.C., Lunsford, L.B., Hromas, R. and Denny, C.T. 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.
- 3. Sorenson, P.H., Lessnick, S.L., Lopez-Terrada, D., Liu, X.F., Triche, T.J. and Denny, C.T. 1994. A second Ewing's sarcoma translocation, t(21;22), fuses the EWS gene to another ETS-family transcription factor, ERG. Nat. Genet. 6: 146-151.
- 4. Lessnick, S.L., Braun, B.S., Denny, C.T. and May, W.A. 1995. Multiple domains mediate transformation by the Ewing's sarcoma EWS/Fli-1 fusion gene. Oncogene 10: 423-431.
- Jeon, I.S., Davis, J.N., Braun, B.S., Sublett, J.E., Roussel, M.F., Denny, C.T. and Shapiro, D.N. 1995. A variant Ewing's sarcoma translocation (7;22) fuses the EWS gene to the ETS gene ETV1. Oncogene 10: 1229-1234.
- 6. Fujimura, Y., Ohno, T., Siddique, H., Lee, L., Rao, V.N. and Reddy, E.S. 1996. The EWS-ATF-1 gene involved in malignant melanoma of soft parts with t(12;22) chromosome translocation, encodes a contitutive transcriptional activator. Oncogene 12: 159-167.
- Kaneko, Y., Kobayashi, H., Handa, M., Satake, N. and Maseki, N. 1997.
 EWS-ERG fusion transcript produced by chromosomal insertion in a Ewing sarcoma. Genes Chromosomes Cancer 18: 228-231.
- 8. Peter, M., Couturier, J., Pacquement, H., Michon, J., Thomas, G., Magdelenat, H. and Delattre, O. 1997. A new member of the ETS family fused to EWS in Ewing tumors. Oncogene 4: 1159-1164.

CHROMOSOMAL LOCATION

Genetic locus: EWSR1 (human) mapping to 22q12.2.

PRODUCT

EWS (h): 293 Lysate represents a lysate of human EWS transfected 293 cells and is provided as 100 μg protein in 200 μl SDS-PAGE buffer.

APPLICATIONS

EWS (h): 293 Lysate is suitable as a Western Blotting positive control for human reactive EWS antibodies. Recommended use: 10-20 μ l per lane.

Control 293 Lysate: sc-110760 is available as a Western Blotting negative control lysate derived from non-transfected 293 cells.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. 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.

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