SANTA CRUZ BIOTECHNOLOGY, INC.

T-47D Cell Lysate: sc-2293

BACKGROUND

Santa Cruz Biotechnology offers a variety of whole cell lysates for use in combination with our antibodies as Western Blotting controls. T-47D Cell Lysate is derived from the T-47D cell line using a procedure that ensures protein integrity and lot-to-lot reproducibility. All lysates are tested by Western Blotting to assure that each one contains the expected concentration and assortment of proteins. Numerous antibodies directed against a wide array of mammalian proteins are used to test each lysate.

The T-47 line was isolated by I. Keydar from a pleural effusion obtained from a 54 year old female patient with an infiltrating ductal carcinoma of the breast. This differentiated epithelial substrain (T-47D) was found to contain cytoplasmic junctions and receptors to 17-β Estradiol, other steroids and calcitonin. T-47D cells express the WNT7B oncogene.

REFERENCES

1. Keydar, I., Chen, L., Karby, S., Weiss, F.R., Delarea, J., Radu, M., Chaitcik, S. and Brenner, H.J. 1979. Establishment and characterization of a cell line of human breast carcinoma origin. Eur. J. Cancer 15: 659-670.
2. Freake, H.C., Marcocci, C., Iwasaki, J. and MacIntyre, I. 1981. 1,25-dihydroxyvitamin D3 specifically binds to a human breast cancer cell line (T47D) and stimulates growth. Biochem. Biophys. Res. Commun. 101: 1131-1138.
3. Sher, E., Eisman, J.A., Moseley, J.M. and Martin, T.J. 1981. Whole-cell uptake and nuclear localization of 1,25-dihydroxycholecalciferol by breast cancer cells (T47 D) in culture. Biochem. J. 200: 315-320.
4. Lamp, S.J., Findlay, D.M., Moseley, J.M. and Martin, T.J. 1981. Calcitonin induction of a persistent activated state of adenylate cyclase in human breast cancer cells (T 47D). J. Biol. Chem. 256: 12269-12274.
5. Judge, S.M. and Chatterton, R.T. 1983. Progesterone-specific stimulation of triglyceride biosynthesis in a breast cancer cell line (T-47D). Cancer Res. 43: 4407-4412.
6. Faust, J.B. and Meeker, T.C. 1992. Amplification and expression of the bcl-1 gene in human solid tumor cell lines. Cancer Res. 52: 2460-2463.
7. Huguet, E.L., McMahon, J.A., McMahon, A.P., Bicknell, R. and Harris, A.L. 1994. Differential expression of human Wnt genes 2, 3, 4, and 7B in human breast cell lines and normal and disease states of human breast tissue. Cancer Res. 54: 2615-2621.
8. Burfeind, P., Chernicky, C.L., Rininsland, F., Ilan, J. and Ilan, J. 1996. Antisense RNA to the type I Insulin-like growth factor receptor suppresses tumor growth and prevents invasion by rat prostate cancer cells *in vivo*. Proc. Natl. Acad. Sci. USA 93: 7263-7268.
9. Bellet, D., Lazar, V., Bièche, I., Paradis, V., Giovangrandi, Y., Paterlini, P., Lidereau, R., Bedossa, P., Bidart, J.M. and Vidaud, M. 1997. Malignant transformation of nontrophoblastic cells is associated with the expression of chorionic gonadotropin β genes normally transcribed in trophoblastic cells. Cancer Res. 57: 516-523.

RESEARCH USE

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

SOURCE

T-47D Cell Lysate was derived from the T-47D cell line.

Organism:	*Homo sapiens* (human)
Organ:	Mammary gland; breast
Tissue:	Duct
Disease:	Ductal carcinoma
Derived from metastatic site:	Pleural effusion
Growth Properties:	Adherent

PRODUCT

Each vial contains 500 µg protein in 200 µl of an SDS-PAGE Western Blotting buffer, which consists of 100 µl RIPA Lysis Buffer and 100 µl Electrophoresis Buffer, 2X.

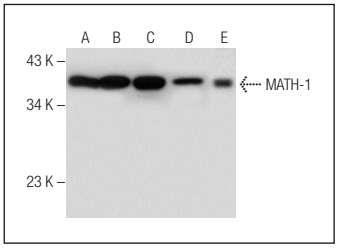
APPLICATIONS

T-47D Cell Lysate is provided as a Western Blotting positive control. Recommended use is 50 µg (20 µl) per lane. Sample vial should be boiled once prior to use.

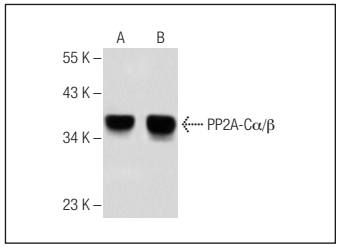
PREPARATION METHOD

Cells are cultured with appropriate media conditions and allowed to reach a confluency of 75%. Cells are lysed using the RIPA Lysis Buffer System (sc-24948). The BCA Protein Assay Kit (sc-202389) is used to determine the total protein concentration. The lysate is adjusted to contain 500 µg of total cellular protein in 100 µl before adding an equal volume of Electrophoresis Sample Buffer, 2X (sc-24945). Final concentration of product is 500 µg total protein in a final volume of 200 µl.

DATA



MATH-1 (18A6): sc-136173. Western blot analysis of MATH-1 expression in T-47D (**A**), PC-12 (**B**), Jurkat (**C**) and NIH/3T3 (**D**) whole cell lysates and human adrenal gland tissue extract (**E**).



PP2A-Cα/β (D-3): sc-376824. Western blot analysis of PP2A-Cα/β expression in MCF7 (**A**) and T-47D (**B**) whole cell lysates.

STORAGE

Store at -20° C; stable for one year from the date of shipment. Non-hazardous. No MSDS required. Minimize repeated freezing and thawing.

PROTOCOLS

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