SANTA CRUZ BIOTECHNOLOGY, INC.

MCF7 Whole Cell Lysate: sc-2206

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Santa Cruz Biotechnology offers a variety of whole cell lysates for use in combination with our antibodies as Western Blotting controls. MCF7 Whole Cell Lysate is derived from the MCF7 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 MCF7 line retains several characteristics of differentiated mammary epithelium, including the ability to process estradiol via cytoplasmic estrogen receptors and the capability of forming domes. The cells express the WNT7B oncogene. Growth of MCF7 cells is inhibited by tumor necrosis factor α (TNFα). Secretion of IGFBPs can be modulated by treatment with anti-estrogens.

REFERENCES

1. Brandes, L.J. and Hermonat, M.W. 1983. Receptor status and subsequent sensitivity of subclones of MCF-7 human breast cancer cells surviving exposure to diethylstilbestrol. Cancer Res. 43: 2831-2835.
2. Sugarman, B.J., et al. 1985. Recombinant human tumor necrosis factor-α: effects on proliferation of normal and transformed cells *in vitro*. Science 230: 943-945.
3. Takahashi, K. and Suzuki, K. 1993. Association of Insulin-like growth-factor-I-induced DNA synthesis with phosphorylation and nuclear exclusion of p53 in human breast cancer MCF-7 cells. Int. J. Cancer 55: 453-458.

SOURCE

MCF7 Whole Cell Lysate is derived from the MCF7 cell line.

Organism:	*Homo sapiens* (human)
Organ:	Mammary gland; breast
Disease:	Adenocarcinoma
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

MCF7 Whole 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.

STORAGE

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

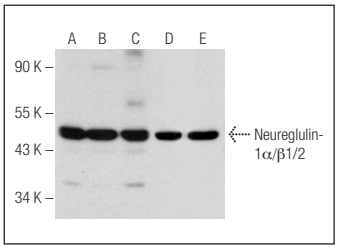
PROTOCOLS

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

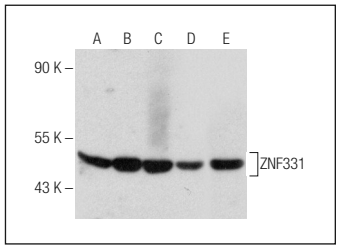
PREPARATION METHOD

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



Neuregulin-1α/β1/2 (C-20): sc-348. Western blot analysis of Neuregulin-1α/β1/2 expression in A-431 (**A**), MCF7 (**B**), MDA-MB-231 (**C**), SK-BR-3 (**D**) and HeLa (**E**) whole cell lysates.



ZNF331 (S-16): sc-249525. Western blot analysis of ZNF331 expression in MCF7 (**A**), DU 145 (**B**), HL-60 (**C**) and WI 38 (**D**) whole cell lysates and human kidney tissue extract (**E**).

SELECT PRODUCT CITATIONS

1. Canellada, A., et al. 2002. *In vitro* modulation of protective antibody responses by estrogen, progesterone and interleukin-6. Am. J. Reprod. Immunol. 48: 334-343.
2. Joshi, R., et al. 2010. Dentin sialophosphoprotein (DSPP) gene-silencing inhibits key tumorigenic activities in human oral cancer cell line, OSC2. PLoS ONE 5: e13974.
3. Mau, M., et al. 2011. Expres-sion of GPR30 and GPR43 in oral tissues: deriving new hypotheses on the role of diet in animal physiology and the development of oral cancers. J. Anim. Physiol. Anim. Nutr. 95: 280-285.
4. Lee, H., et al. 2012. Urinary exosomal WT1 in childhood nephrotic syndrome. Pediatr. Nephrol. 27: 317-320.

RESEARCH USE

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