SANTA CRUZ BIOTECHNOLOGY, INC.

K-562 Whole Cell Lysate: sc-2203

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. K-562 Whole Cell Lysate is derived from the K-562 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 continuous cell line K-562 was established by Lozzio and Lozzio from the pleural effusion of a 53 year old female with chronic myelogenous leukemia in terminal blast crises. The cell population has been characterized as highly undifferentiated and of the granulocytic series. Studies conducted by Anderson, et al, on the surface membrane properties led to the conclusion that the K-562 was a human erythroleukemia line. The K-562 cell line has attained widespread use as a highly sensitive *in vitro* target for the natural killer assay.

REFERENCES

1. Lozzio, C.B. and Lozzio, B.B. 1975. Human chronic myelogenous leukemia cell-line with positive Philadelphia chromosome. Blood 45: 321-334.
2. Ortaldo, J.R., et al. 1977. Specificity of natural cytotoxic reactivity of normal human lymphocytes against a myeloid leukemia cell line. J. Natl. Cancer Inst. 59: 77-82.

SOURCE

K-562 Whole Cell Lysate is derived from the K-562 cell line.

Organism:	*Homo sapiens* (human)
Organ:	Bone marrow
Disease:	Chronic myelogenous leukemia (CML)
Growth Properties:	Suspension

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

K-562 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.

RESEARCH USE

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

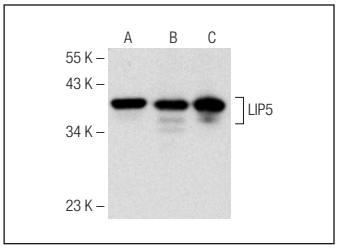
PROTOCOLS

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

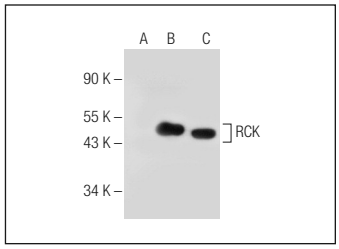
PREPARATION METHOD

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



LIP5 (D-6): sc-374012. Western blot analysis of LIP5 expression in HEK293 (**A**), Hep G2 (**B**) and K-562 (**C**) whole cell lysates.



RCK (E-12): sc-376433. Western blot analysis of RCK expression in non-transfected 293T: sc-117752 (**A**), human RCK transfected 293T: sc-117056 (**B**) and K-562 (**C**) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Reuben, et al. 2004. Basic calcium phosphate crystals activate p44/42 MAPK signal transduction pathway via protein kinase Cμ in human fibroblasts. J. Biol. Chem. 279: 35719-35725.
2. Depping, R., et al. 2005. Expression of the erythropoietin receptor in human heart. J. Thorac. Cardiovasc. Surg. 130: 877-878.
3. Otani, H., et al. 2007. Antagonistic effects of bone morphogenetic protein-4 and -7 on renal mesangial cell proliferation induced by aldosterone through MAPK activation. Am. J. Physiol. Renal. Physiol. 292: F1513-F1525.
4. Tovey, S.C., et al. 2008. Selective coupling of type 6 adenylyl cyclase with type 2 IP3 receptors mediates direct sensitization of IP3 receptors by cAMP. J. Cell Biol. 183: 297-311.
5. Win, H.Y. and Acevedo-Duncan, M. 2008. Atypical protein kinase C phosphorylates IKKαβ in transformed non-malignant and malignant prostate cell survival. Cancer Lett. 270: 302-311.
6. Goto, J., et al. 2009. Enhancement of aldosterone-induced catecholamine production by bone morphogenetic protein-4 through activating Rho and SAPK/JNK pathway in adrenomedullar cells. Am. J. Physiol. Endocrinol. Metab. 296: E904-E916.
7. Volgger, B., et al. 2010. Importance of erythropoetin receptor expression in tumour tissue for the clinical course of breast cancer. Anticancer Res. 30: 3721-3726.
8. Loesch, A., et al. 2010. Sciatic nerve of diabetic rat treated with epoetin delta: effects on C-fibers and blood vessels including pericytes. Angiology 61: 651-668.