SANTA CRUZ BIOTECHNOLOGY, INC.

K-562 nuclear extract: sc-2130

BACKGROUND

Santa Cruz Biotechnology offers a variety of whole cell lysates and nuclear extracts for use in combination with our antibodies as Western Blotting controls. All extracts 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 extract. K-562 is a cell line from human bone marrow cells, derived from a 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 K-562 cell line has attained widespread use as a highly sensitive *in vitro* target for the natural killer assay. Cultures have been shown to exhibit this sensitivity for assessing human natural killer activity. K-562 blasts are multipotential, hematopoietic malignant cells that spontaneously differentiate into recognizable progenitors of the erythrocytic, granulocytic and monocytic series.

BACKGROUND

1. Lozzio, C.B. and Lozzio, B.B. 1975. Human chronic myelogenous leukemia cell-line with positive Philadelphia chromosome. Blood 45: 321-334.
2. Ortald,o 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.
3. Lozzio, B.B. and Lozzio, C.B. 1979. Properties and usefulness of the original K-562 human myelogenous leukemia cell line. Leuk. Res. 3: 363-370.
4. Andersson, L.C., et al. 1979. K562—a human erythroleukemic cell line. Int. J. Cancer 23: 143-147.
5. Koeffler, H.P. and Golde, D.W. 1980. Human myeloid leukemia cell lines: a review. Blood 56: 344-350.
6. Lozzio, B.B., et al. 1981. A multipotential leukemia cell line (K-562) of human origin. Proc. Soc. Exp. Biol. Med. 166: 546-550.
7. Dimery, I.W, et al. 1983. Variation amongst K-562 cell cultures. Exp. Hematol. 11: 601-610.
8. Chan, Y.J., et al. 1996. Two distinct upstream regulatory domains containing multicopy cellular transcription factor binding sites provide basal repression and inducible enhancer characteristics to the immediate-early IES (US3) promoter from human cytomegalovirus. J. Virol. 70: 5312-5328.
9. Kolanus W, et al. 1996. $\alpha_L\beta_2$ integrin/LFA-1 binding to ICAM-1 induced by cytohesin-1 a cytoplasmic regulatory molecule. Cell 86: 233-242.

SOURCE

K-562 nuclear extract is derived from K-562 cells.

Organism:	*Homo sapiens* (human)
Tissue:	Bone marrow
Disease:	chronic myelogenous leukemia (CML)
Cell Type:	Lymphoblast

STORAGE

Extracts should be stored at -70° C. Avoide repeated freezing and thawing.

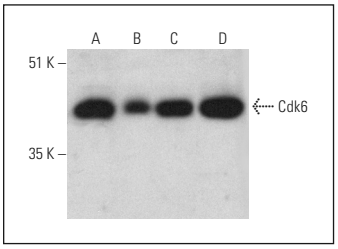
PRODUCT

Supplied as 4 vials. Each vial contains 250 µg nuclear extract in 50 µl buffer containing 20 mM HEPES (pH 7.9), 20% v/v glycerol, 0.1 M KCl, 0.2 mM EDTA, 0.5 mM PMSF and 0.5 mM DTT.

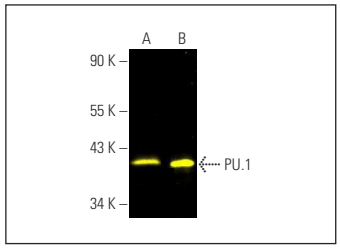
APPLICATIONS

K-562 nuclear extract is provided as a Western blotting and Gel Shift control.

DATA



Cdk6 (B-10) HRP: sc-7961 HRP. Direct western blot analysis of Cdk6 expression in CCRF-CEM (**A**) and Raji (**B**) whole cell lysates and Jurkat (**C**) and K-562 (**D**) nuclear extracts.



PU.1 (C-3) Alexa Fluor® 488: sc-390405 AF488. Direct fluorescent western blot analysis of PU.1 expression in K-562 (**A**) and RAW 264.7 (**B**) nuclear extracts. Blocked with UltraCruz® Blocking Reagent: sc-516214.

SELECT PRODUCT CITATIONS

1. Forsberg, L., et al. 2001. A common functional C-T substitution polymorphism in the promoter region of the human catalase gene influences transcription factor binding, reporter gene transcription and is correlated to blood catalase levels. Free Radic. Biol. Med. 30: 500-505.
2. Subbaramaiah, K., et al. 2002. Cyclooxygenase-2 is overexpressed in HER-2/neu-positive breast cancer: evidence for involvement of AP-1 and PEA3. J. Biol. Chem. 277: 18649-18657.
3. Kazuki, Y., et al. 2014. Down syndrome-associated haematopoiesis abnormalities created by chromosome transfer and genome editing technologies. Sci. Rep. 4: 6136.

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.