

THP-1 Cell Lysate: sc-2238

BACKGROUND

Santa Cruz Biotechnology offers a variety of whole cell lysates for use in combination with our antibodies as Western Blotting controls. THP-1 Whole Cell Lysate is derived from the THP-1 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 THP-1 cell line was established from a 1 year old male. The cells are phagocytic (for both latex beads and sensitized erythrocytes) and lack surface and cytoplasmic immunoglobulin. Monocytic differentiation can be induced with the phorbol ester 12-O-tetradecanoylphorbol-13-acetate (TPA). Cellular products include lysozyme and complement (C3), and Fc receptors are expressed.

REFERENCES

1. Tsuchiya, S., et al. 1982. Induction of maturation in cultured human monocytic leukemia cells by a phorbol diester. *Cancer Res.* 42: 1530-1536.
2. Skubitz, K.M., et al. 1983. Human granulocyte surface molecules identified by murine monoclonal antibodies. *J. Immunol.* 131: 1882-1888.
3. Cuthbert, J.A. and Lipsky, P.E. 1997. Regulation of proliferation and Ras localization in transformed cells by products of mevalonate metabolism. *Cancer Res.* 57: 3498-3504.

SOURCE

THP-1 Whole Cell Lysate is derived from the THP-1 cell line.

Organism: *Homo sapiens* (human)
Organ: Peripheral blood
Disease: Acute monocytic leukemia
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

THP-1 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.

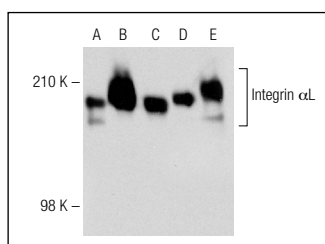
PROTOCOLS

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

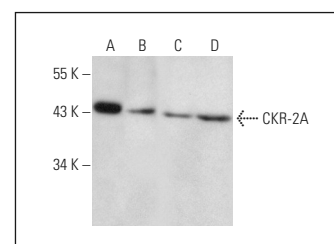
PREPARATION METHOD

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



Integrin αL (27): sc-135951. Western blot analysis of Integrin αL expression in Jurkat (A), THP-1 (B), CCRF-CEM (C), AML-193 (D) and HL-60 (E) whole cell lysates.



CKR-2A (C-19): sc-46860. Western blot analysis of CKR-2A expression in THP-1 (A), Jurkat (B), RAW 264.7 (C) and NIH/3T3 (D) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Su, B., et al. 2003. *Helicobacter pylori* activates Toll-like receptor 4 expression in gastrointestinal epithelial cells. *Infect. Immun.* 71: 3496-3502.
2. Hirata, T., et al. 2004. Evidence for the presence of toll-like receptor 4 system in the human endometrium. *J. Clin. Endocrinol. Metab.* 90: 548-556.
3. Shulby, S.A., et al. 2004. CX3CR1-fractalkine expression regulates cellular mechanisms involved in adhesion, migration, and survival of human prostate cancer cells. *Cancer Res.* 64: 4693-4698.
4. Deng, H.X., et al. 2010. FUS-immunoreactive inclusions are a common feature in sporadic and non-SOD1 familial amyotrophic lateral sclerosis. *Ann. Neurol.* 67: 739-748.
5. Li, L., et al. 2010. Vascular oxidative stress and inflammation increase with age: ameliorating effects of α-lipoic acid supplementation. *Ann. N.Y. Acad. Sci.* 1203: 151-159.
6. Tong, J., et al. 2011. Heterogeneous intrastriatal pattern of proteins regulating axon growth in normal adult human brain. *Neurobiol. Dis.* 41: 458-468.
7. Kim, M., et al. 2012. Fractalkine receptor CX₃CR1 is expressed in epithelial ovarian carcinoma cells and required for motility and adhesion to peritoneal mesothelial cells. *Mol. Cancer Res.* 10: 11-24.

RESEARCH USE

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