MLF1 (D-1): sc-514294

**BACKGROUND**

Myeloid leukemia factor 1 (MLF1) is a 268 amino acid protein expressed by a gene that is involved in translocations associated with acute myeloid leukemia. MLF1 is a widely expressed negative regulator of cell cycle progression upstream of the tumor suppressor p53. MLF1 induces p53-dependent cell cycle arrest in murine embryonic fibroblasts. MLF1 expression also inversely affects the endogenous level of COP1, a ubiquitin ligase for p53, inhibits Epo-induced cell cycle exit, and inhibits a rise in the cell cycle inhibitor p27. Polo-like kinase 1 (Plk1) phosphorylates MLF1 at its Thr78 site, which induces ubiquitination and degradation of MLF1 before the transition from metaphase to anaphase. Mutations of these phosphorylation sites stabilize MLF1 and inhibit mitotic progression. MLF1 normally functions in multi-potent progenitor cells, and its dysregulation may be somewhat responsible for leukemogenesis.

**REFERENCES**


**CHROMOSOMAL LOCATION**

Genetic locus: MLF1 (human) mapping to 3q25.32; MLF1 (mouse) mapping to 3 E1.

**SOURCE**

MLF1 (D-1) is a mouse monoclonal antibody raised against amino acids 1-135 mapping at the N-terminus of MLF1 of human origin.

**PRODUCT**

Each vial contains 200 µg IgG2k, kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

MLF1 (D-1) is available conjugated to agarose (sc-514294 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-514294 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-514294 PE), fluorescein (sc-514294 FITC), Alexa Fluor® 488 (sc-514294 AF488), Alexa Fluor® 546 (sc-514294 AF546), Alexa Fluor® 594 (sc-514294 AF594) or Alexa Fluor® 647 (sc-514294 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-514294 AF680) or Alexa Fluor® 790 (sc-514294 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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**APPLICATIONS**

MLF1 (D-1) is recommended for detection of MLF1 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for MLF1 siRNA (h): sc-61055, MLF1 siRNA (m): sc-61056, MLF1 shRNA Plasmid (h): sc-61055-SH, MLF1 shRNA Plasmid (m): sc-61056-SH, MLF1 shRNA (h) Lentiviral Particles: sc-61055-V and MLF1 shRNA (m) Lentiviral Particles: sc-61056-V.

Molecular Weight of MLF1: 31 kDa.

Positive Controls: NTERA-2 cl.D1 whole cell lysate: sc-364181, ES-2 cell lysate: sc-24674 or HeLa whole cell lysate: sc-2200.

**RECOMMENDED SUPPORT REAGENTS**

To ensure optimal results, the following support reagents are recommended:


**DATA**

**SELECT PRODUCT CITATIONS**


**STORAGE**

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

**RESEARCH USE**

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