

MKLP-1 (D-17): sc-33335

BACKGROUND

The monoclonal antibody CHO1 detects a spindle antigen required for mitotic progression. Screening a HeLa cell cDNA expression library with this antibody has been shown to yield a cDNA predicted to encode a protein significantly related within its amino-terminal half to the motor ends of members of the kinesin superfamily. Since this similarity does not extend further, it has been suggested that the CHO1 antigen, now designated MKLP-1 (mitotic kinesin-like protein-1), represents a novel kinesin. Sequence analysis has also been shown to predict that MKLP-1 possesses features typical of nuclear proteins. Immunocytological studies have demonstrated that MKLP-1 moves from the nucleus early in mitosis and then to the midbody after cytokinesis. MKLP-1 has been shown to bundle antiparallel microtubules *in vitro* and to move them at rates comparable to spindle elongation *in vivo*. A hamster homolog of MKLP-1, designated CHO1 antigen, has also been isolated. Although apparently functionally equivalent with respect to microtubule bundling activity, there are significant differences between the human and hamster proteins at their C-termini, possibly due to alternative splicing or the presence of more than one MKLP-1 locus.

CHROMOSOMAL LOCATION

Genetic locus: KIF23 (human) mapping to 15q23.

SOURCE

MKLP-1 (D-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of MKLP-1 of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-33335 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

MKLP-1 (D-17) is recommended for detection of MKLP-1 of human and, to a lesser extent, rat origin by Western Blotting (starting dilution 1:200, 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).

MKLP-1 (D-17) is also recommended for detection of MKLP-1 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for MKLP-1 siRNA (h): sc-35936, MKLP-1 siRNA (r): sc-270014, MKLP-1 shRNA Plasmid (h): sc-35936-SH, MKLP-1 shRNA Plasmid (r): sc-270014-SH, MKLP-1 shRNA (h) Lentiviral Particles: sc-35936-V and MKLP-1 shRNA (r) Lentiviral Particles: sc-270014-V.

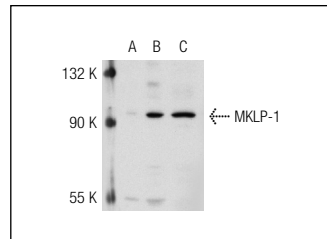
Molecular Weight of MKLP-1: 110 kDa.

Positive Controls: MKLP-1 (h2): 293T Lysate: sc-116361, K-562 nuclear extract: sc-2130 or K-562 whole cell lysate: sc-2203.

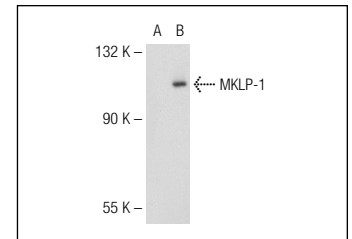
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



MKLP-1 (D-17): sc-33335. Western blot analysis of MKLP-1 expression in non-transfected 293T: sc-117752 (A), human MKLP-1 transfected 293T: sc-113424 (B) and K-562 (C) whole cell lysates.



MKLP-1 (D-17): sc-33335. Western blot analysis of MKLP-1 expression in non-transfected: sc-117752 (A) and human MKLP-1 transfected: sc-116361 (B) 293T whole cell lysates.

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.

PROTOCOLS

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



Try **MKLP-1 (C-12): sc-390113** or **MKLP-1 (24): sc-136473**, our highly recommended monoclonal alternatives to MKLP-1 (D-17). Also, for AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647 conjugates, see **MKLP-1 (C-12): sc-390113**.