SANTA CRUZ BIOTECHNOLOGY, INC.

PELO (D-15): sc-160655

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

PELO (pelota homolog), also known as CGI-17 or PRO1770, is a 385 amino acid nuclear and cytoplasmic protein that belongs to the eukaryotic release factor 1 family and the pelota subfamily. Evolutionary conserved, PELO may be involved in the regulation of cell proliferation and stem cell self-renewal, and is suggested to be required for normal chromosome segregation during cell division and genomic stability. PELO may posses ribonuclease activity and has the ability to recognize stalled ribosomes, thereby triggering endo-nucleolytic cleavage of mRNA, a mechanism that releases non-functional ribosomes and degrades damaged mRNAs. PELO is ubiquitously expressed and utilizes divalent metal cations as cofactors. PELO may be essential for spermatogenesis, cell cycle control and in meiotic cell division. PELO is encoded by a gene located on human chromosome 5q11.2.

REFERENCES

1. Eberhart, C.G. and Wasserman, S.A. 1995. The pelota locus encodes a protein required for meiotic cell division: an analysis of G_2/M arrest in *Drosophila* spermatogenesis. Development 121: 3477-3486.
2. Ragan, M.A., et al. 1996. An archaebacterial homolog of pelota, a meiotic cell division protein in eukaryotes. FEMS Microbiol. Lett. 144: 151-155.
3. Shamsadin, R., et al. 2000. Molecular cloning, expression and chromosome location of the human pelota gene PELO. Cytogenet. Cell Genet. 90: 75-78.
4. Shamsadin, R., et al. 2002. Mouse pelota gene (Pelo): cDNA cloning, genomic structure, and chromosomal localization. Cytogenet. Genome Res. 97: 95-99.
5. Adham, I.M., et al. 2003. Disruption of the pelota gene causes early embryonic lethality and defects in cell cycle progression. Mol. Cell. Biol. 23: 1470-1476.
6. Xi, R., et al. 2005. Pelota controls self-renewal of germline stem cells by repressing a Bam-independent differentiation pathway. Development 132: 5365-5374.
7. Burnicka-Turek, O., et al. 2010. Pelota interacts with HAX1, EIF3G and SRPX and the resulting protein complexes are associated with the Actin cytoskeleton. BMC Cell Biol. 11: 28.

CHROMOSOMAL LOCATION

Genetic locus: PELO (human) mapping to 5q11.2; Pelo (mouse) mapping to 13 D2.2.

SOURCE

PELO (D-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of PELO 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-160655 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

PELO (D-15) is recommended for detection of PELO of mouse, rat and human 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).

PELO (D-15) is also recommended for detection of PELO in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for PELO siRNA (h): sc-91932, PELO siRNA (m): sc-152161, PELO shRNA Plasmid (h): sc-91932-SH, PELO shRNA Plasmid (m): sc-152161-SH, PELO shRNA (h) Lentiviral Particles: sc-91932-V and PELO shRNA (m) Lentiviral Particles: sc-152161-V.

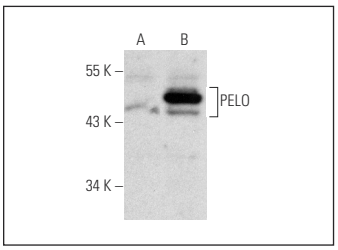
Molecular Weight of PELO: 43 kDa.

Positive Controls: PELO (h2): 293T Lysate: sc-170856 or HeLa whole cell lysate: sc-2200.

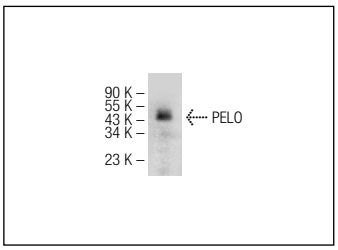
RECOMMENDED SECONDARY REAGENTS

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



PELO (D-15): sc-160655. Western blot analysis of PELO expression in non-transfected: sc-117752 (**A**) and human PELO transfected: sc-170856 (**B**) 293T whole cell lysates.



PELO (D-15): sc-160655. Western blot analysis of PELO expression in HeLa whole cell lysate.

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.