

HP1BP3 (K-13): sc-138343

BACKGROUND

HP1BP3 (heterochromatin protein 1-binding protein 3), also known as HP1-BP74, is a 553 amino acid nuclear and chromosomal protein that exists as a component of heterochromatin. As such, HP1BP3 is involved in chromatin function and structure. Existing as four alternatively spliced isoforms, HP1BP3 undergoes post-translational phosphorylation, most likely by either ATM or ATR. HP1BP3 contains three H15 (linker histone H1/H5 globular) domains and is encoded by a gene that maps to human chromosome 1p36.12. Human chromosome 1 spans 260 million base pairs, contains over 3,000 genes, comprises nearly 8% of the human genome and houses a large number of disease-associated genes, including those that are involved in familial adenomatous polyposis, Stickler syndrome, Parkinson's disease, Gaucher disease, schizophrenia and Usher syndrome.

REFERENCES

1. Dobbie, Z., et al. 1997. Identification of a modifier gene locus on chromosome 1p35-36 in familial adenomatous polyposis. *Hum. Genet.* 99: 653-657.
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3. Tayebi, N., et al. 2001. Gaucher disease and parkinsonism: a phenotypic and genotypic characterization. *Mol. Genet. Metab.* 73: 313-321.
4. Plasilova, M., et al. 2004. Exclusion of an extracolonic disease modifier locus on chromosome 1p33-36 in a large Swiss familial adenomatous polyposis kindred. *Eur. J. Hum. Genet.* 12: 365-371.
5. Matsuoaka, S., et al. 2007. ATM and ATR substrate analysis reveals extensive protein networks responsive to DNA damage. *Science* 316: 1160-1166.
6. Betarbet, R., et al. 2008. Fas-associated factor 1 and Parkinson's disease. *Neurobiol. Dis.* 31: 309-315.
7. Yurov, Y.B., et al. 2008. The schizophrenia brain exhibits low-level aneuploidy involving chromosome 1. *Schizophr. Res.* 98: 139-147.
8. Yokoi, T., et al. 2009. Analysis of the vitreous membrane in a case of type 1 Stickler syndrome. *Graefes Arch. Clin. Exp. Ophthalmol.* 247: 715-718.

CHROMOSOMAL LOCATION

Genetic locus: HP1BP3 (human) mapping to 1p36.12; Hp1bp3 (mouse) mapping to 4 D3.

SOURCE

HP1BP3 (K-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of HP1BP3 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-138343 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

HP1BP3 (K-13) is recommended for detection of HP1BP3 isoforms 1-3 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); non cross-reactive with isoforms HP1BP3-4 or HP1BP3-5.

HP1BP3 (K-13) is also recommended for detection of HP1BP3 isoforms 1-3 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for HP1BP3 siRNA (h): sc-88624, HP1BP3 siRNA (m): sc-146073, HP1BP3 shRNA Plasmid (h): sc-88624-SH, HP1BP3 shRNA Plasmid (m): sc-146073-SH, HP1BP3 shRNA (h) Lentiviral Particles: sc-88624-V and HP1BP3 shRNA (m) Lentiviral Particles: sc-146073-V.

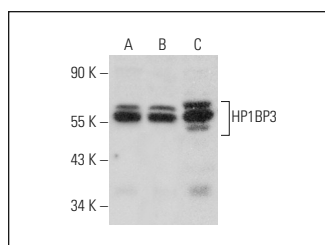
Molecular Weight of HP1BP3 isoforms: 61/57/44/15 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, HEK293 whole cell lysate: sc-45136 or K-562 nuclear extract: sc-2130.

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



HP1BP3 (K-13): sc-138343. Western blot analysis of HP1BP3 expression in HEK293 (A) and HeLa (B) whole cell lysates and K-562 nuclear extract (C).

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.