

KBP (H-12): sc-390449

BACKGROUND

KBP (KIF1-binding protein), also known as KIAA1279, is a 621 amino acid mitochondrial protein that is highly expressed in heart, brain, ovary, testis and spinal cord, with lower levels of expression found in most adult tissues. Belonging to the KIF1-binding protein family, KBP may be involved in the regulation of mitochondrial transport by modulating the motor activity of KIF1B. KBP is also required for the organization of axonal microtubules, as well as for the maintenance of axonal growth during peripheral and central nervous system development. The gene encoding KBP maps to human chromosome 10q22.1 and mouse chromosome 10 B4. Defects to the gene encoding KBP has been linked to Goldberg-Shprintzen megacolon syndrome, a neurological disorder characterized by microcephaly, mental retardation and facial dysmorphism.

REFERENCES

1. Brooks, A.S., et al. 2005. Homozygous nonsense mutations in KIAA1279 are associated with malformations of the central and enteric nervous systems. *Am. J. Hum. Genet.* 77: 120-126.
2. Wozniak, M.J., et al. 2005. The novel protein KBP regulates mitochondria localization by interaction with a kinesin-like protein. *BMC Cell Biol.* 6: 35.
3. Murphy, H.R., et al. 2006. Two brothers with Goldberg-Shprintzen syndrome. *Clin. Dysmorphol.* 15: 165-169.

CHROMOSOMAL LOCATION

Genetic locus: KIF1BP (human) mapping to 10q22.1; Kif1bp (mouse) mapping to 10 B4.

SOURCE

KBP (H-12) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 380-394 within an internal region of KBP of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

KBP (H-12) is available conjugated to agarose (sc-390449 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-390449 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-390449 PE), fluorescein (sc-390449 FITC), Alexa Fluor® 488 (sc-390449 AF488), Alexa Fluor® 546 (sc-390449 AF546), Alexa Fluor® 594 (sc-390449 AF594) or Alexa Fluor® 647 (sc-390449 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-390449 AF680) or Alexa Fluor® 790 (sc-390449 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-390449 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

STORAGE

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

APPLICATIONS

KBP (H-12) is recommended for detection of KBP 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).

KBP (H-12) is also recommended for detection of KBP in additional species, including canine, bovine and porcine.

Suitable for use as control antibody for KBP siRNA (h): sc-90661, KBP siRNA (m): sc-146346, KBP shRNA Plasmid (h): sc-90661-SH, KBP shRNA Plasmid (m): sc-146346-SH, KBP shRNA (h) Lentiviral Particles: sc-90661-V and KBP shRNA (m) Lentiviral Particles: sc-146346-V.

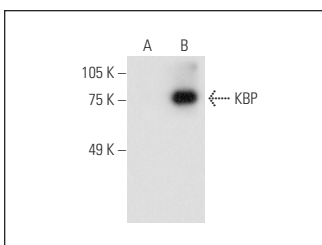
Molecular Weight of KBP: 72 kDa.

Positive Controls: KBP (m3): 293T Lysate: sc-121185.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



KBP (H-12): sc-390449. Western blot analysis of KBP expression in non-transfected: sc-117752 (A) and mouse KBP transfected: sc-121185 (B) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

1. Pallavicini, G., et al. 2021. Goldberg-Shprintzen syndrome protein KIF1BP is a CITK interactor implicated in cytokinesis. *J. Cell Sci.* 134: jcs250902.

RESEARCH USE

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

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