

BICD2 (V-14): sc-160168

BACKGROUND

BICD2 [bicaudal D homolog 2 (*Drosophila*)], whose alternative names include protein bicaudal D homolog 2, Bic-D 2, KIAA0699 or bA526D8.1, is one of two human homologs of *Drosophila* BICD and consists of 824 amino acids. BICD2 is ubiquitously expressed and localizes to the Golgi apparatus, cytoplasm and cytoskeleton. BICD2 co-localizes with Rab 6A on the *trans*-Golgi network (TGN) and on cytoplasmic vesicles, and is known to recruit the dynein-dynactin motor complex to regulate coat complex coatomer protein 1 (COPI)-independent Golgi-to-endoplasmic reticulum vacuolar transport. BICD2 is phosphorylated by Nek9 *in vitro*, and interacts with Dynactin 2. Existing as two isoforms due to alternative splicing events, BICD2 is encoded by a gene mapping to human chromosome 9.

REFERENCES

1. Ishikawa, K., et al. 1998. Prediction of the coding sequences of unidentified human genes. X. The complete sequences of 100 new cDNA clones from brain which can code for large proteins *in vitro*. DNA Res. 5: 169-176.
2. Hoogenraad, C.C., et al. 2001. Mammalian Golgi-associated bicaudal-D2 functions in the dynein-dynactin pathway by interacting with these complexes. EMBO J. 20: 4041-4054.
3. Holland, P.M., et al. 2002. Purification, cloning, and characterization of Nek8, a novel NIMA-related kinase, and its candidate substrate BICD2. J. Biol. Chem. 277: 16229-16240.
4. Matanis, T., et al. 2002. Bicaudal-D regulates COPI-independent Golgi-ER transport by recruiting the dynein-dynactin motor complex. Nat. Cell Biol. 4: 986-992.
5. Hoogenraad, C.C., et al. 2003. Bicaudal D induces selective dynein-mediated microtubule minus end-directed transport. EMBO J. 22: 6004-6015.
6. Fuchs, E., et al. 2005. Assay and properties of Rab 6 interaction with dynein-dynactin complexes. Meth. Enzymol. 403: 607-618.

CHROMOSOMAL LOCATION

Genetic locus: BICD2 (human) mapping to 9q22.31; Bicd2 (mouse) mapping to 13 A5.

SOURCE

BICD2 (V-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of BICD2 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-160168 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

BICD2 (V-14) is recommended for detection of BICD2 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 BICD1.

BICD2 (V-14) is also recommended for detection of BICD2 in additional species, including equine, bovine and porcine.

Suitable for use as control antibody for BICD2 siRNA (h): sc-92831, BICD2 siRNA (m): sc-141701, BICD2 shRNA Plasmid (h): sc-92831-SH, BICD2 shRNA Plasmid (m): sc-141701-SH, BICD2 shRNA (h) Lentiviral Particles: sc-92831-V and BICD2 shRNA (m) Lentiviral Particles: sc-141701-V.

Molecular Weight (predicted) of BICD2: 94 kDa.

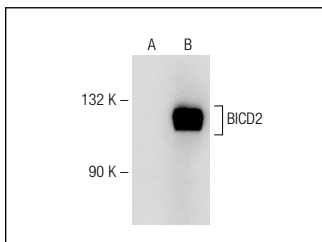
Molecular Weight (observed) of BICD2: 104 kDa.

Positive Controls: MES-SA/Dx5 cell lysate: sc-2284, BICD2 (m): 293T Lysate: sc-118810 or BICD2 (h): 293T Lysate: sc-111417.

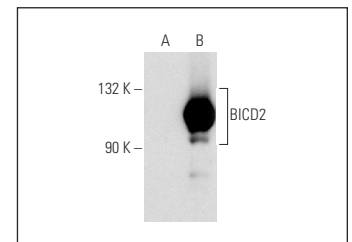
RECOMMENDED SECONDARY REAGENTS

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



BICD2 (V-14): sc-160168. Western blot analysis of BICD2 expression in non-transfected: sc-117752 (A) and human BICD2 transfected: sc-111417 (B) 293T whole cell lysates.



BICD2 (V-14): sc-160168. Western blot analysis of BICD2 expression in non-transfected: sc-117752 (A) and mouse BICD2 transfected: sc-118810 (B) 293T whole cell lysates.

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.