SANTA CRUZ BIOTECHNOLOGY, INC.

SH3BP4 (A-6): sc-393730

BACKGROUND

SH3BP4 (SH3-domain binding protein 4), also known as TTP or BOG25, is a 963 amino acid protein that localizes to the nucleus and is ubiquitously expressed with higher expression in pancreas. SH3BP4 exists as a homodimer or homooligomer and consists of three Asn-Pro-Phe (NPF) motifs, an SH3 domain, a PXXP motif, a bipartite nuclear targeting signal and a tyrosine phosphorylation site. SH3BP4 associates with endocytic proteins, including Clathrin and dynamin and may also be involved in intracellular sorting as well as the cell cycle. SH3BP4 is encoded by a gene located on human chromosome 2, which houses over 1,400 genes and comprises nearly 8% of the human genome. Harlequin icthyosis, a rare and morbid skin deformity, is associated with mutations in the ABCA12 gene, while the lipid metabolic disorder sitosterolemia is associated with defects in the ABCG5 and ABCG8 genes. Additionally, an extremely rare recessive genetic disorder, Alström syndrome, is caused by mutations in the ALMS1 gene, which maps to chromosome 2.

CHROMOSOMAL LOCATION

Genetic locus: SH3BP4 (human) mapping to 2q37.2; Sh3bp4 (mouse) mapping to 1 D.

SOURCE

SH3BP4 (A-6) is a mouse monoclonal antibody raised against amino acids 1-193 mapping at the N-terminus of SH3BP4 of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

SH3BP4 (A-6) is available conjugated to agarose (sc-393730 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-393730 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-393730 PE), fluorescein (sc-393730 FITC), Alexa Fluor® 488 (sc-393730 AF488), Alexa Fluor® 546 (sc-393730 AF546), Alexa Fluor® 594 (sc-393730 AF594) or Alexa Fluor® 647 (sc-393730 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-393730 AF680) or Alexa Fluor® 790 (sc-393730 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

SH3BP4 (A-6) is recommended for detection of SH3BP4 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).

Suitable for use as control antibody for SH3BP4 siRNA (h): sc-94846, SH3BP4 siRNA (m): sc-153436, SH3BP4 shRNA Plasmid (h): sc-94846-SH, SH3BP4 shRNA Plasmid (m): sc-153436-SH, SH3BP4 shRNA (h) Lentiviral Particles: sc-94846-V and SH3BP4 shRNA (m) Lentiviral Particles: sc-153436-V.

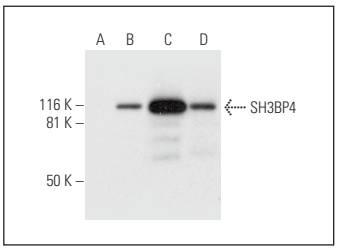
Molecular Weight of SH3BP4 isoforms 1/2: 107/60 kDa.

Positive Controls: SH3BP4 (m): 293T Lysate: sc-123533, HeLa whole cell lysate: sc-2200 or human lung extract: sc-363767.

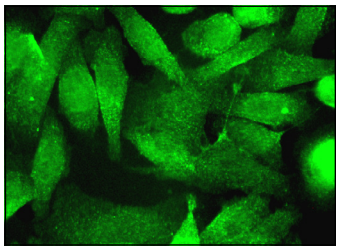
RECOMMENDED SUPPORT REAGENTS

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



SH3BP4 (A-6): sc-393730. Western blot analysis of SH3BP4 expression in non-transfected 293T: sc-117752 (**A**), mouse SH3BP4 transfected 293T: sc-123533 (**B**) and HeLa (**C**) whole cell lysates and human lung tissue extract (**D**).



SH3BP4 (A-6): sc-393730. Immunofluorescence staining of formalin-fixed SW480 cells showing cytoplasmic and nuclear localization

SELECT PRODUCT CITATIONS

1. O'Loughlin, T., et al. 2018. The MYO6 interactome reveals adaptor complexes coordinating early endosome and cytoskeletal dynamics. EMBO Rep. 19: e44884.
2. Luo, C., et al. 2019. Sestrin2 negatively regulates casein synthesis through the SH3BP4-mTORC1 pathway in response to AA depletion or supplementation in cow mammary epithelial cells. J. Agric. Food Chem. 67: 4849-4859.
3. Burckhardt, C.J., et al. 2021. SH3BP4 promotes neuropilin-1 and α5-Integrin endocytosis and is inhibited by Akt. Dev. Cell 56: 1164-1181.e12.
4. Huang, G., et al. 2022. Identification and validation of autophagy-related gene expression for predicting prognosis in patients with idiopathic pulmonary fibrosis. Front. Immunol. 13: 997138.
5. Tang, X., et al. 2024. Identifications of novel host cell factors that interact with the receptor-binding domain of the SARS-CoV-2 spike protein. J. Biol. Chem. 300: 107390.

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.