SANTA CRUZ BIOTECHNOLOGY, INC.

QIP1 (B-6): sc-390535

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

QIP1, also known as KPNA4 (karyopherin α4), IPOA3 (importin α3) or SRP3, is a member of the importin α family. It is involved in nuclear import and forms a complex with the importin β protein, karyopherin β1, functioning as its adapter protein. QIP1 binds to substrates containing nuclear localization signal (NLS) motifs, while karyopherin β1 facilitates the binding of the importin/substrate complex to the nuclear pore complex (NPC). Subsequently, the importin/substrate complex is translocated through the pore via a Ran-dependent mechanism. QIP1 contains one IBB domain at its hydrophilic N-terminus which is required for binding karyopherin β1 and ten ARM repeats in its hydrophobic central region. QIP1 is expressed at high levels in pancreas, lung, ovary, testis, small intestine, heart and skeletal muscle, exhibiting both cytoplasmic and nuclear localization.

CHROMOSOMAL LOCATION

Genetic locus: KPNA4 (human) mapping to 3q25.33; Kpna4 (mouse) mapping to 3 E1.

SOURCE

QIP1 (B-6) is a mouse monoclonal antibody raised against amino acids 361-521 mapping at the C-terminus of QIP1 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.

STORAGE

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

APPLICATIONS

QIP1 (B-6) is recommended for detection of QIP1 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

QIP1 (B-6) is also recommended for detection of QIP1 in additional species, including equine, canine and bovine.

Suitable for use as control antibody for QIP1 siRNA (h): sc-62916, QIP1 siRNA (m): sc-62917, QIP1 shRNA Plasmid (h): sc-62916-SH, QIP1 shRNA Plasmid (m): sc-62917-SH, QIP1 shRNA (h) Lentiviral Particles: sc-62916-V and QIP1 shRNA (m) Lentiviral Particles: sc-62917-V.

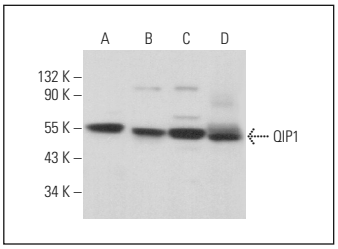
Molecular Weight of QIP1: 58 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, NIH/3T3 whole cell lysate: sc-2210 or U-698-M whole cell lysate: sc-364799.

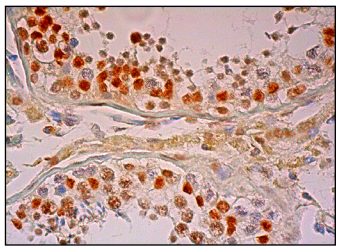
RECOMMENDED SUPPORT REAGENTS

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. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



QIP1 (B-6): sc-390535. Western blot analysis of QIP1 expression in HeLa (**A**), NIH/3T3 (**B**) and U-698-M (**C**) whole cell lysates and mouse brain tissue extract (**D**).



QIP1 (B-6): sc-390535. Immunoperoxidase staining of formalin fixed, paraffin-embedded human testis tissue showing nuclear staining of cells in seminiferous ducts.

SELECT PRODUCT CITATIONS

1. Burgers, L.D., et al. 2021. The natural product vioprolide A exerts anti-inflammatory actions through inhibition of its cellular target NOP14 and downregulation of importin-dependent NFκB p65 nuclear translocation. Biomed. Pharmacother. 144: 112255.

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.