SANTA CRUZ BIOTECHNOLOGY, INC.

IFT20 (N-12): sc-107627

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

IFT20 (intraflagellar transport 20) is a 132 amino acid protein that localizes to a variety of locations within the cell, including the Golgi apparatus, the cilium basal body and the centrosome. Expressed ubiquitously, IFT20 interacts with KIF3B and functions as a component of the intraflagellar transport (IFT), which is comprised of several IFT proteins that work in tandem to mediate ciliary process assembly. Additionally, IFT20 is thought to play a role in the trafficking of ciliary membrane proteins from the Golgi to the cilium. Defects in the gene encoding IFT20 are associated with misorientation of the mitotic spindle and cystic kidney disease, which can ultimately lead to renal failure. IFT20 is expressed as 3 alternatively spliced isoforms and is encoded by a gene that maps to human chromosome 17, which comprises nearly 2.5% of the human genome and houses over 1,200 genes.

REFERENCES

1. Baker, S.A., et al. 2003. IFT20 links Kinesin II with a mammalian intraflagellar transport complex that is conserved in motile flagella and sensory cilia. J. Biol. Chem. 278: 34211-34218.
2. Yin, G., et al. 2003. Cloning and characterization of the human IFT20 gene. Mol. Biol. Rep. 30: 255-260.
3. Jurczyk, A., et al. 2004. Pericentrin forms a complex with intraflagellar transport proteins and Polycystin-2 and is required for primary cilia assembly. J. Cell Biol. 166: 637-643.
4. Follit, J.A., et al. 2006. The intraflagellar transport protein IFT20 is associated with the Golgi complex and is required for cilia assembly. Mol. Biol. Cell 17: 3781-3792.
5. Jonassen, J.A., et al. 2008. Deletion of IFT20 in the mouse kidney causes misorientation of the mitotic spindle and cystic kidney disease. J. Cell Biol. 183: 377-384.
6. Krock, B.L. and Perkins, B.D. 2008. The intraflagellar transport protein IFT57 is required for cilia maintenance and regulates IFT-particle-Kinesin II dissociation in vertebrate photoreceptors. J. Cell Sci. 121: 1907-1915.
7. Absalon, S., et al. 2008. Intraflagellar transport and functional analysis of genes required for flagellum formation in trypanosomes. Mol. Biol. Cell 19: 929-944.

CHROMOSOMAL LOCATION

Genetic locus: IFT20 (human) mapping to 17q11.2; Ift20 (mouse) mapping to 11 B5.

SOURCE

IFT20 (N-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of IFT20 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-107627 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

IFT20 (N-12) is recommended for detection of IFT20 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

IFT20 (N-12) is also recommended for detection of IFT20 in additional species, including equine and porcine.

Suitable for use as control antibody for IFT20 siRNA (h): sc-94233, IFT20 siRNA (m): sc-146174, IFT20 shRNA Plasmid (h): sc-94233-SH, IFT20 shRNA Plasmid (m): sc-146174-SH, IFT20 shRNA (h) Lentiviral Particles: sc-94233-V and IFT20 shRNA (m) Lentiviral Particles: sc-146174-V.

Molecular Weight of IFT20: 18 kDa.

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) 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.

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.

PROTOCOLS

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