# IFT122 (E-23): sc-133688



The Power to Question

#### **BACKGROUND**

IFT122 (intraflagellar transport 122 homolog) is also known as SPG, WDR10p or WDR10 (WD repeat-containing protein 10) and is an 1,241 amino acid protein that is predominantly expressed in testis and pituitary. IFT122 expression occurs in the germ cells of testis and in the somatic granulosa cells of ovary, suggesting that this protein may be involved in differentiation of cells within the gonads. IFT122 is localized to the cytoplasm and is expressed as two isoforms. IFT122 contains seven WD repeats at its N-terminal and is a member of the WD repeat protein family. The WD repeat family consists of functionally diverse regulatory proteins in eukaryotes involved in a variety of cellular processes, including cell cycle progression, signal transduction, apoptosis and gene regulation. The WD reapeats of proteins are thought to allow them to facilitate formation of heterotrimeric or multi-protein complexes. In addition, IFT122 contains an AF-2 domain that functions in transcriptional activation and by recruiting co-regulatory molecules. Mutations in AF-2 domains are thought to abolish transcriptional activities of proteins.

## **REFERENCES**

- Gross, C., De Baere, E., Lo, A., Chang, W. and Messiaen, L. 2001. Cloning and characterization of human WDR10, a novel gene located at 3q21 encoding a WD-repeat protein that is highly expressed in pituitary and testis. DNA Cell Biol. 20: 41-52.
- 2. Online Mendelian Inheritance in Man, OMIM™. 2004. Johns Hopkins University, Baltimore, MD. MIM Number: 606045. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
- 3. Prüfer, K., Hernandez, C. and Gilbreath, M. 2008. Mutations in the AF-2 region abolish ligand-induced intranuclear immobilization of the liver X receptor  $\alpha$ . Exp. Cell Res. 314: 2652-2660.
- Smith, T.F. 2008. Diversity of WD-repeat proteins. Subcell. Biochem. 48: 20-30.
- 5. Achari, Y., Lu, T., Katzenellenbogen, B.S. and Hart, D.A. 2009. Distinct roles for AF-1 and -2 of ER $\alpha$  in regulation of MMP-13 promoter activity. Biochim. Biophys. Acta: E-Published.
- 6. Cortellino, S., Wang, C., Wang, B., Bassi, M.R., Caretti, E., Champeval, D., Calmont, A., Jarnik, M., Burch, J., Zaret, K.S., Larue, L. and Bellacosa, A. 2009. Defective ciliogenesis, embryonic lethality and severe impairment of the Sonic hedgehog pathway caused by inactivation of the mouse complex A intraflagellar transport gene IFT122/WDR10, partially overlapping with the DNA repair gene Med1/MBD4. Dev. Biol. 325: 225-237.

### **CHROMOSOMAL LOCATION**

Genetic locus: IFT122 (human) mapping to 3q21.3.

#### **SOURCE**

IFT122 (E-23) is an affinity purified rabbit polyclonal antibody raised against synthetic IFT122 peptide of human origin.

#### **PRODUCT**

Each vial contains 50  $\mu g$  lgG in 500  $\mu l$  PBS with <0.1% sodium azide, 0.1% gelatin and <0.02% sucrose.

#### **APPLICATIONS**

IFT122 (E-23) is recommended for detection of IFT122 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for IFT122 siRNA (h): sc-78342, IFT122 shRNA Plasmid (h): sc-78342-SH and IFT122 shRNA (h) Lentiviral Particles: sc-78342-V.

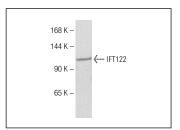
Molecular Weight of IFT122: 140 kDa.

Positive Controls: 721 B whole cell lysate.

## **RECOMMENDED SECONDARY REAGENTS**

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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).

#### DATA



IFT122 (E-23): sc-133688. Western blot analysis of IFT122 expression in 721 B whole cell lysate.

#### **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.

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