abcam

ab42497

Anti-IFT88 antibody

Key facts

Isotype	IgG
Host species	Goat
Storage buffer	pH: 7.3 Preservative: 0.02% Sodium azide Constituents: 0.5% BSA
Form	Liquid
Clonality	Polyclonal
Immunogen	Synthetic Peptide within Human IFT88 aa 800 to C-terminus. The exact immunogen used to generate this antibody is proprietary information. Database link Q13099
Purification technique	Affinity purification Immunogen
Specificity	This antibody is expected to recognise both reported isoforms (NP_783195.2; NP_006522.2).
Concentration	0.5 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →
Purification notes	Purified from goat serum by ammonium sulphate precipitation followed by antigen affinity chromatography using the immunizing peptide.

Reactivity data

WB

Tested

Species	Mouse
Dilution info	1-3 µg/mL

Notes	1 hour primary incubation is recommended for this product.

Species	Human
Dilution info	1-3 µg/mL
Notes	1 hour primary incubation is recommended for this product.

Species	Rat
Dilution info	2 µg/mL
Notes	-

Predicted

Species	Dog
Dilution info	-
Notes	-

ICC/IF

Tested

Species	Human
Dilution info	10 µg/mL
Notes	-

Expected

Species	Mouse, Rat
Dilution info	Use at an assay dependent concentration.
Notes	-

Predicted

Species	Dog
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	-
Notes	-

Expected

Species	Mouse, Rat
Dilution info	Use at an assay dependent concentration.
Notes	-

Predicted

Species	Dog
Dilution info	-
Notes	-

Target data

See full target information IFT88

Function	Positively regulates primary cilium biogenesis (PubMed:17604723). Also involved in autophagy since it is required for trafficking of ATG16L and the expansion of the autophagic compartment.

Storage

Shipped at conditions	Blue Ice
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	-20°C
Aliquoting information	Upon delivery aliquot

Storage information	Avoid freeze / thaw cycle

Supplementary info

This supplementary information is collated from multiple sources and compiled automatically.

Activity summary	IFT88 also known as Intraflagellar transport protein 88 is an essential component of the intraflagellar transport (IFT) mechanism. This protein has a mass of approximately 88 kDa and is expressed in ciliated cells across various tissues. Cilia are critical structures in cellular function and IFT88 operates as part of the IFT-B complex playing a role in the assembly and maintenance of cilia. Its localization primarily occurs in the cilia where it functions as a transporter of protein cargos necessary for cilia construction and function.
Biological function summary	The role of IFT88 within the context of cilia involves the facilitation of bidirectional movement along the axoneme which is the central shaft of a cilium. As part of the IFT-B complex IFT88 aids in the transport of tubulin and other ciliary components from the cell body to the ciliary tip ensuring cilia's structural integrity and functional viability. Additionally IFT88 supports signal transduction processes associated with ciliary functions including sensing extracellular signals and maintaining cellular signaling pathways.
Pathways	IFT88 has significant involvement in the Hedgehog and Wnt signaling pathways. These pathways are integral for cell differentiation proliferation and embryonic development. IFT88 collaborates with proteins such as Gli transcription factors in Hedgehog signaling and interacts with various cytosolic components in Wnt signaling showing its versatile role in cellular processes. Through these interactions IFT88 indirectly influences the outcome of these signaling pathways impacting tissue patterning and cell fate decisions during development.
Associated diseases and disorders	IFT88 mutations are linked to ciliopathies like polycystic kidney disease and Bardet-Biedl syndrome. These conditions demonstrate defects in ciliary function where IFT88 dysfunction results in abnormal cellular processes. The connection between IFT88 and these diseases extends to its interactions with proteins such as polycystin-1 and polycystin-2 in kidney development and function. Such associations emphasize the critical role of IFT88 in maintaining normal cellular and organ function whereby its impairment leads to profound developmental and physiological anomalies.

Product promise

Tested

We have tested this species and application combination and it works. It is covered by our product promise.

Expected

We have not tested this specific species and application combination in-house, but expect it will work. It is covered by our product promise.

Predicted

This species and application combination has not been tested, but we predict it will work based on strong homology. However, this combination is not covered by our product promise.

Not recommended

We do not recommend this combination. It is not covered by our product promise.

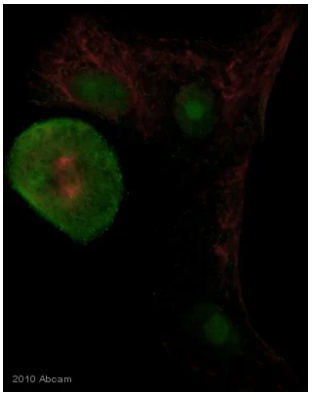
We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

In the unlikely event of one of our products not working as expected, you are covered by our product promise.

Full details and terms and conditions can be found here:
Terms & Conditions.

---

5 product images

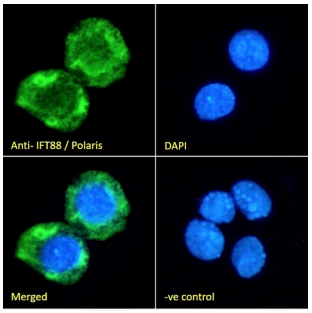


This image is a courtesy of Luke Hofkamp

Immunocytochemistry/ Immunofluorescence - Anti-IFT88 antibody (ab42497)

IFT88 Immunocytochemistry/ Immunofluorescence staining using goat Anti-IFT88 antibody

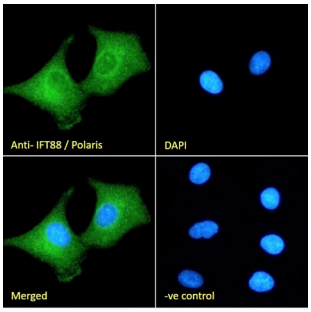
ab42497 staining IFT88 in human prostate epithelial primary cells by Immunocytochemistry/ Immunofluorescence. Cells were fixed with paraformaldehyde and permeabilized with 0.5% Triton x100. Samples were incubated with primary antibody (1/100:in DMEM w/ 10% FBS) for 1 hour at 200C. An Alexa Fluor ® 546-conjugated donkey polyclonal to goat IgG was used undiluted as secondary antibody.



Immunocytochemistry/ Immunofluorescence - Anti-IFT88 antibody (ab42497)

IFT88 Immunocytochemistry/ Immunofluorescence staining of HepG2 (human hepatoblastoma cell line) cells using goat Anti-IFT88 antibody

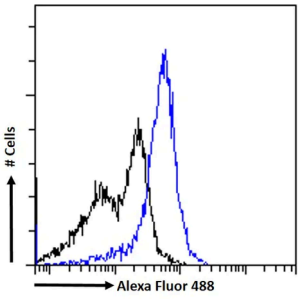
Immunofluorescence analysis of paraformaldehyde fixed HepG2 cells labeling IFT88 with ab42497 (green). Cells permeabilized with 0.15% Triton. Primary incubation 1hr (10 µg/mL) followed by Alexa Fluor® 488 secondary antibody (2µg/ml) showing cytoplasmic staining. The nuclear stain is DAPI (blue). Negative control: Unimmunized goat IgG (10µg/ml) followed by Alexa Fluor® 488 secondary antibody (2µg/ml).



Immunocytochemistry/ Immunofluorescence - Anti-IFT88 antibody (ab42497)

IFT88 Immunocytochemistry/ Immunofluorescence staining of A549 (human lung adenocarcinoma cell line) cells using goat Anti-IFT88 antibody

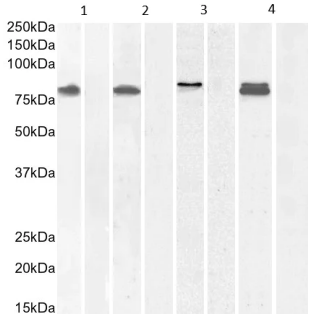
Immunofluorescence analysis of paraformaldehyde fixed A549 cells labeling IFT88 with ab42497 (green). Cells permeabilized with 0.15% Triton. Primary incubation 1hr (10 µg/mL) followed by Alexa Fluor® 488 secondary antibody (2µg/ml) showing cytoplasmic staining. The nuclear stain is DAPI (blue). Negative control: Unimmunized goat IgG (10µg/ml) followed by Alexa Fluor® 488 secondary antibody (2µg/ml).



Flow Cytometry (Intracellular) - Anti-IFT88 antibody (ab42497)

IFT88 Flow Cytometry (Intracellular) staining of THP-1 (human monocytic leukemia cells) cells. using goat Anti-IFT88 antibody

Flow cytometric analysis of paraformaldehyde fixed THP-1 cells (blue line) permeabilized with 0.5% Triton. Primary incubation 1hr (10µg/ml) followed by Alexa Fluor® 488 conjugated secondary antibody (1µg/ml). IgG control: Unimmunized goat IgG (black line) followed by Alexa Fluor® 488 secondary antibody.



Western blot - Anti-IFT88 antibody (ab42497)

IFT88 Western blot staining using goat Anti-IFT88 antibody

Lysates, 35µg protein in RIPA buffer. Detected by chemiluminescence.
All lanes:
Western blot - Anti-IFT88 antibody (ab42497) at 2 µg/mL

Lane 1:
K562 (human chronic myeloid leukemia (CML) cell line) cell lysate at 35 µg

Lane 2:
THP-1 (human monocytic leukemia cell line) cell lysate at 35 µg

Lane 3:
U251 (human glioblastoma multiforme cell line) cell lysate at 35 µg

Lane 4:
KNRK (Kirsten murine sarcoma virus-transformed normal rat kidney cells) cell lysate at 35 µg

Observed band size: 80 kDa, 85 kDa

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.