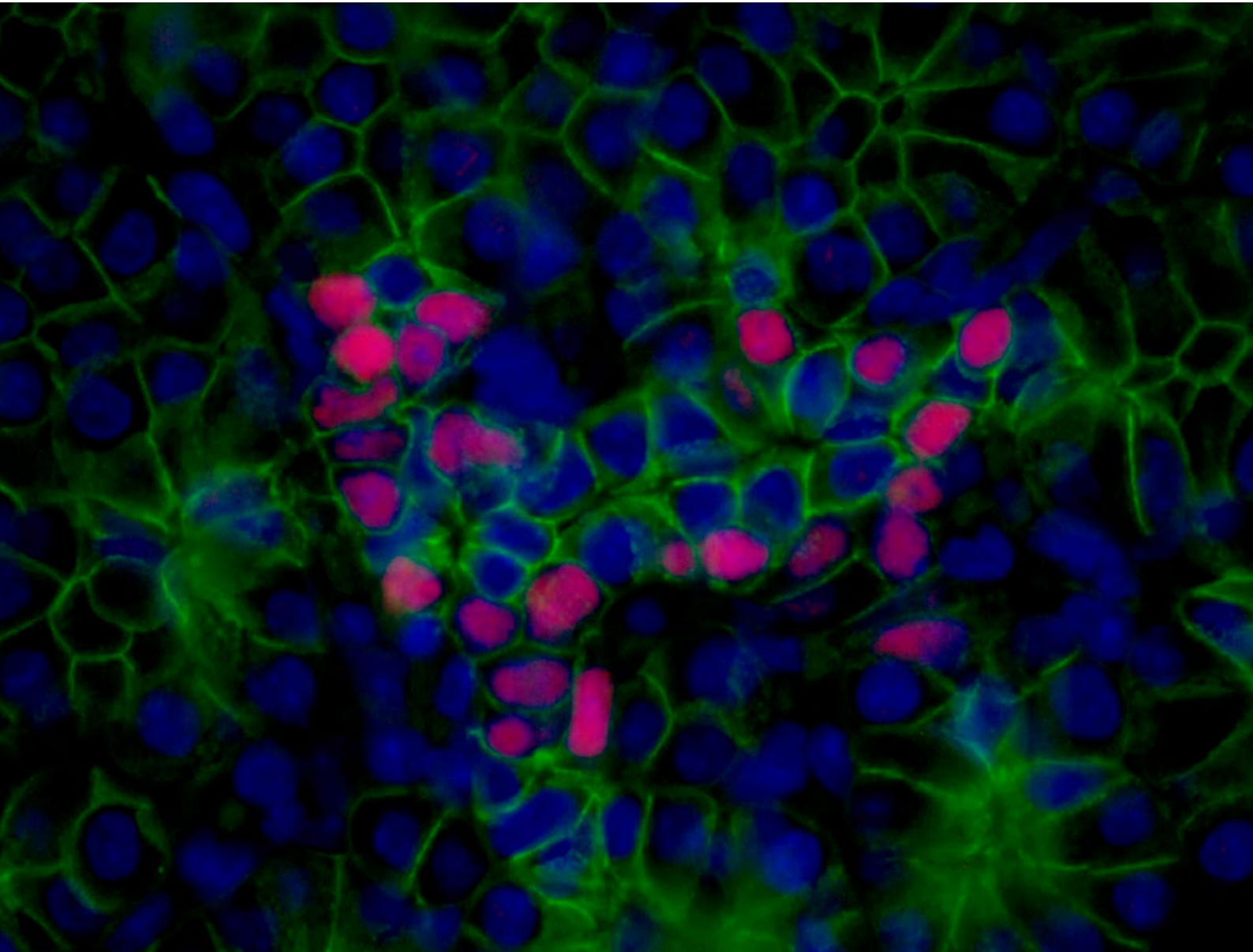


ANTIBODIES FOR DEVELOPMENTAL BIOLOGY

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Front & Back Cover:

IF result (trunk or trunk-associated region; nucleus stain; RED) of NKX2-2 antibody (13013-1-AP) with E16.5 mouse pancreas by Dr. Nicholas George, Sarvetnick Lab – UNMC. (Green, E-Cadherin; RED, NKX2-2; Blue, DAPI).

WELCOME

Foreword

Developmental biology covers a broad spectrum of scientific research relating to the growth and development of living things. Not only does it concern the embryogenic events immediately following fertilization, it also encompasses the genetic control of cell growth, differentiation and morphogenesis – key components of regeneration and aging in the adult organism.

In this development-focused catalog you will find antibodies to those targets involved in pattern formation, such as HOX gene products and proteins involved in Notch and Hedgehog signaling; neural tube formation, such as sonic hedgehog protein; and organogenesis such as Wnt, FGF, BMP and EYA proteins. At the center of the catalog, you will also find a primer on the primary cilium, with details on Proteintech® antibodies recognizing the proteins involved in the generation and maintenance of this vital developmental structure.

This catalog is essentially a shortlist of around one quarter of the antibodies Proteintech has for developmental biology protein targets. If you can't find an antibody to your target of choice here, we're confident that with over 2,000 primary antibodies relating to development in the complete Proteintech inventory you'll find what you're looking for online at www.ptglab.com.

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FROM OUR BENCH TO YOUR BENCH™

Since the day it was founded, Proteintech has been making all of its products to the highest standards possible whilst taking complete responsibility for the quality of each product.

- Proteintech makes every single antibody in its 12,000+ catalog.
- Each Proteintech product is unique and cannot be bought under a different label.
- Antibodies are tested with siRNA treated samples to demonstrate specificity.
- It works in every single species and application or get a full money-back refund.

Proteintech has over 12,000 antibodies in its extensive catalog, all fully validated and available for next day delivery.

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FOCUS ARTICLES

Antibodies For Cilia Development

By Deborah Grainger

The primary cilium acts as a sensory organelle that transfers information from the environment to the cell interior. Once thought of as an evolutionary artifact, this organelle is now understood to be crucial for regulating important cellular processes, including the cell cycle, cytoskeletal organization, intraflagellar transport and signaling pathways such as hedgehog, notch and canonical and non-canonical Wnt/planar cell polarity (PCP) pathways. Proteintech has over 70 antibodies recognizing cilia-related proteins in its catalog. This article reviews a selection of these targeting proteins involved in cilia development, or ciliogenesis...

CP110

Catalog Number
12780-1-AP

Type
Rabbit Polyclonal

Applications
ELISA, FC, IF, IHC, IP, WB

34 Publications

KD/KO Validated

CP110, also named CCP110 or KIAA0419, is a 110 kDa centriolar protein, not to be confused with CEP110 (centriolin). CP110 positively regulates centriole duplication while restricting centriole elongation and ciliogenesis. It acts as a key negative regulator of ciliogenesis in collaboration with CEP97 by capping the mother centriole, thereby preventing cilia formation.

The Proteintech antibody anti-CP110 (12780-1-AP) has appeared in several publications since its first appearance in Nature Cell Biology in mid-2012. In this paper the authors describe CP110's regulation by the microRNA miR-129-3p (M129). The Proteintech anti-CP110

antibody was utilized for Western blotting (WB) and immunofluorescence studies looking at the impact of blocking or upregulating M129 on ciliogenesis and cilia elongation. Cilia formation was inhibited when M129 levels were depleted, and, conversely, potentially upregulated with M129 overexpression. Correspondingly, WB experiments showed that CP110 protein levels were depleted in the presence of overexpressed M129. Several other Proteintech antibodies were also used by the authors for this work, including those targeting housekeeping protein GAPDH (60004-1-Ig), the actin nucleation protein ARP2 (10922-1-AP) and actin binding LIM protein 1 (ABLIM1, 15129-1-AP).



Immunohistochemical of paraffin-embedded human prostate cancer using CP110 antibody (12780-1-AP) at a dilution of 1:100 (10x objective).

IFT88

Catalog Number
13967-1-AP

Type
Rabbit Polyclonal

Applications
ELISA, IF, IHC, IP, WB

102 Publications

KD/KO Validated

IFT88 (intraflagellar transport protein 88; also known as TG737 or TTC10) is a component of IFT particles required for cilium biogenesis. Along with other molecular motors and IFT particles, IFT88 helps mediate intraflagellar transport, an important process essential for the assembly and maintenance of both primary and motile cilia and flagella in many organisms. IFT88 also localizes to spindle poles during mitosis and is required for spindle orientation. Defects in IFT88 lead to polycystic kidney disease, characterized by progressive cyst development and bilaterally enlarged kidneys.

Proteintech's polyclonal IFT88 antibody (13967-1-AP) has appeared in over 40 publications to date, recently appearing in Nature Cell Biology in June 2014. The paper looks at the role of another protein, Kif7, in mammalian Hedgehog (Hh) signaling and cilium tip organization, but utilizes anti-IFT88 as a marker for cilium retraction along with acetylated tubulin in immunofluorescence staining. The IFT88 signal outlines the original shape of the cilium, while acetylated tubulin marks the shrinking microtubules of the retreating cilium.

The Proteintech polyclonal IFT88 antibody was raised against the C-terminal region of human IFT88 and can detect endogenous levels of IFT88.

Acetylated α -tubulin (K40)

Catalog Number
66200-1-Ig

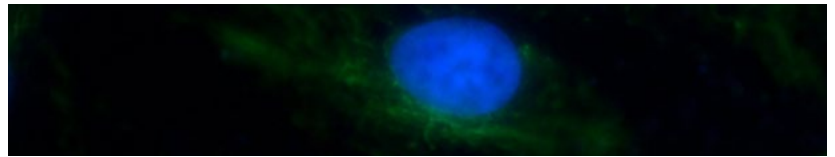
Type
Mouse Monoclonal

Applications
ELISA, IF, IHC, WB

4 Publications

The acetylation of K40 on α -tubulin is a hallmark of stable microtubules, and anti-acetylated α -tubulin (anti-ace tubulin) is the antibody of choice for researchers wishing to perform control immunofluorescence staining of stable cilia. The acetylated residue of α -tubulin is K40, which is catalyzed by α -tubulin acetyl-transferase (α -TAT).

Proteintech's anti-ace tubulin (K40) antibody (66200-1-Ig) can be used to reliably mark the cilium; as mentioned previously, it can also be used to gauge cilium retraction in tandem with IFT88.



Immunofluorescent analysis of MDCK cells using TUBA1A (ace-40Lys) antibody (66200-1-Ig) at a dilution of 1:50 and Alexa Fluor 488-conjugated AffiniPure Goat Anti-Mouse IgG (H+L).

ARL13B

Catalog Number
17711-1-AP

Type
Rabbit Polyclonal

Applications
ELISA, IF, IHC, IP, WB

114 Publications

KD/KO Validated

ARL13B, (also named ARL2L1), is a small ciliary G protein of the Ras superfamily. Localized to cilia, it is required for cilium biogenesis as well as sonic hedgehog signaling and antibodies targeting ARL13B can be used to mark the cilium (PMID:22072986). Defects in ARL13B lead to Joubert syndrome (JBTS), an autosomal recessive disorder characterized by malformation of the cerebellum. Consequentially JBTS patients lack muscle control and tone, among other defects.

Proteintech's anti-ARL13B antibody (17711-1-AP) has featured in 30 peer-reviewed publications to date, including

one that further investigates its interaction with the phosphatase inositol polyphosphate-5-phosphatase E (INPP5E) – another JBTS-causing protein when mutated. Along with a C-terminal motif and prenylation signals, ciliary targeting of INPP5E is facilitated by ARL13B. ARL13B missense mutations that cause JBTS in humans disrupt the ARL13B-INPP5E interaction. The paper, which appeared in PNAS at the end of 2012, identifies several more centrosomal and ciliary proteins involved in ARL13B-INPP5E interactions, and found that this functional network of proteins is also involved in JBTS and the related ciliopathy nephronophthisis.

BBS2

Catalog Number
11188-2-AP

Type
Rabbit Polyclonal

Applications
ELISA, IF, IHC, IP, WB

7 Publications

No information is available regarding the specific function of Bardet-Biedl syndrome (BBS) protein 2, but it is known to be one of the seven BBS proteins that form the stable core of the BBSome. The BBSome is a component of the ciliary basal body and is integral to the formation of a functional primary cilium as mutations in BBS proteins, as well as several others, lead to their eponymous syndrome BBS. BBS is a heterogeneous, pleiotropic human disorder characterized by obesity, retinopathy, polydactyly, renal and cardiac malformations, learning disabilities, hypogonadism, and an increased incidence of diabetes and hypertension.

Proteintech's BBS2 antibody (11188-2-AP) has appeared in several publications since its addition to the catalog. One of these appearances, in the Journal Cell, describes how the BBSome establishes an electron-rich coat complex that sorts membrane proteins to primary cilia, including the somatostatin receptor 3 (SSTR3) signaling molecule. The BBSome coat model suggested by the authors could explain the variety of symptoms found in BBS patients: likely resulting from the failure to transport signaling receptors to the cilium through the lack of a stable BBSome – though in the case of SSTR3, its exact role in BBS is unclear.



IF result (cilia stain) of anti-BBS2 (11188-2-AP, 1:50) with serum-starved hTERT-RPE1 cells by Dr. Moshe Kim.

Investigating Kidney Development With Proteintech's SIX2 Antibody

By Ashley Juavinett

Most likely, you've got two kidneys, each composed of functional units known as nephrons, convoluted loops of epithelial tissue that are constantly working to filter your blood and produce urine. You might have 200,000 of these nephrons, or you might have 2 million – the more, the better. Unfortunately, eating your veggies and getting exercise won't give you more nephrons: nephrogenesis ends by 36 weeks of gestation, meaning that the final number of nephrons in each kidney is established before you're even born. So what does determine if you're well endowed with lots of nephrons?

While the coarse progression of kidney development is fairly well understood, the highly orchestrated pattern of genes and proteins that directs this complex process and the generation of each of your nephrons is still a bit of a mystery. Step by step, researchers are pulling apart pathways of genes that regulate renal development. One of these genes, *Six2*, has been implicated in a variety of developmental processes, from limb to eye development. Here, we take a look at a recent set of literature suggesting that *Six2* has a crucial role in kidney development, research enabled, in part, by the Proteintech *Six2* antibody.

As it turns out, *Six2* marks renal progenitor cells, and is therefore a useful way to distinguish between two major developmental parts of the kidney – the ureteric bud (UB) and the nephrogenic "cap" mesenchyme (CM). Nephrons develop from these progenitor cells in the CM, which surround the branching UB structure. A recent study used this fact, and Proteintech's *Six2* antibody, to differentiate between the CM and UB compartments and quantify tissue dynamics in the developing kidney (Short et al., 2014). In a renal tour-de-force, these researchers describe the spatial and cellular development of the kidney, showing that kidney morphogenesis is not a simple, iterative process. Future studies will be able to build on their methodologies to compare renal development across disease models.

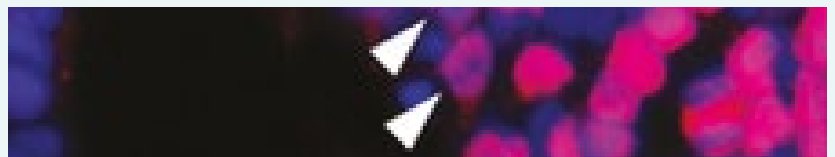
Using microfluidic/robotic tools coupled with RNA-seq (and once again, Proteintech's *Six2* antibody), another group of researchers obtained single cell details about gene expression in early kidney development (Brunskill et al., 2014). To their surprise, they found that *Six2* was transcribed alongside *Foxd1*, another protein that is involved in a separate developmental pathway. This suggests that initial stages of organogenesis involve priming cells for multiple lineages, followed by turning off most of these genes. As gene regulation largely happens via epigenetic mechanisms,

another study examined the chromatin landscape of nephron progenitors, showing that these cells have a broad methylation signature (McLaughlin et al., 2013).

As in most biological processes, kidney development is a careful balance of genes and molecules, with deliberate timing. If one link in the chain is altered, proper development is at risk. For instance, a group of researchers at Columbia recently showed that if you reduce the number of progenitors via genetic ablation, UB branching changes and there is a permanent nephron deficit (Cebrian et al., 2014). In addition, there are a host of necessary genes that are often expressed alongside *Six2*. One gene, *Sall1*, has been shown to have a partially-overlapping mechanism of promoting nephrogenesis, and deletion of this gene results in severe progenitor depletion and apoptosis of neighboring differentiating nephrons (Kanda et al., 2014). On the other hand, if you overexpress a regulating gene known as *Lin28*, you could induce tumor growth (Urbach et al., 2014). These studies, and many others like them, used Proteintech's *Six2* antibody to identify renal progenitors and shed some light on kidney development.

For promising clinical applications of this developmental research, several groups are working to induce kidney progenitors from human embryonic stem cells. By demonstrating that their cells express *Six2*, as well as other early genes, the researchers can be sure that they have bona fide kidney progenitors. In 2013, an international team of researchers showed that they could generate UB progenitor-like cells from human pluripotent cells (Xia et al., 2013). Remarkably, a subsequent study showed that these cells reintegrated with mouse kidney cells and self-organized into 3D structures, suggesting that stem cell derived renal tissue therapeutic potential (Takasato et al., 2014). So, even if you don't have a plethora of nephrons, someday science may be able to help you generate some more!

You can place your order online, by email, or fax.



After generating kidney progenitor cells from hESCs, the researchers showed that these cells could re-integrate with mouse kidney cells. White arrowheads indicate hESCs that have integrated into mouse renal structures. Modified from Takasato et al., 2014.

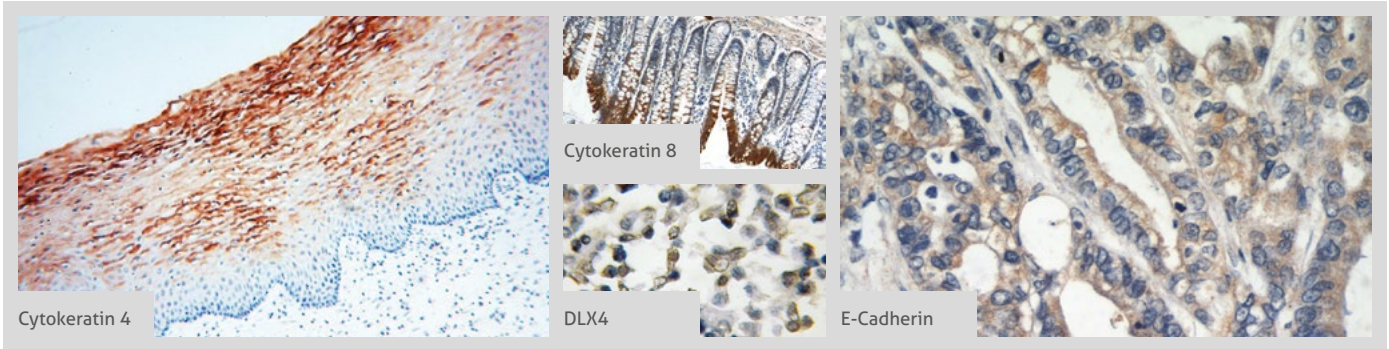
ANTIBODY PRODUCT LIST

| Antibody Name | Cat. No. | Type | Applications |
|-------------------|---------------|-------------|----------------------------|
| ABLIM1 | 15129-1-AP | Rabbit Poly | ELISA, IF, IHC, WB |
| ABLIM2 | 22433-1-AP | Rabbit Poly | ELISA, IHC, IP, WB |
| ADAM17-Specific | 20259-1-AP | Rabbit Poly | ELISA, IHC, WB |
| ADAM19 | 22216-1-AP | Rabbit Poly | ELISA, IHC, IP, WB |
| AKT1 | 53 10176-1-AP | Rabbit Poly | ELISA, FC, IF, IHC, IP, WB |
| AKT1 | 60203-1-Ig | Mouse Mono | ELISA, FC, IF, IHC, IP, WB |
| AKT1 | 60203-2-Ig | Mouse Mono | ELISA, IF, IHC, IP, WB |
| AKT1 | 51077-1-AP | Rabbit Poly | ELISA, IF, IHC, WB |
| ALX3 | 22358-1-AP | Rabbit Poly | ELISA, WB |
| AMOT | 16870-1-AP | Rabbit Poly | ELISA, WB |
| AMOTL1 | 2 16871-1-AP | Rabbit Poly | ELISA, WB |
| Angiogenin | 18302-1-AP | Rabbit Poly | ELISA, IHC, WB |
| Angiopoietin 1 | 23302-1-AP | Rabbit Poly | ELISA, IF, WB |
| ANGPTL1 | 14709-1-AP | Rabbit Poly | ELISA, IHC, WB |
| ANGPTL2 | 2 12316-1-AP | Rabbit Poly | ELISA, IHC, IP, WB |
| AP2A1 | 2 11401-1-AP | Rabbit Poly | ELISA, IF, IHC, IP, WB |
| APC | 19782-1-AP | Rabbit Poly | ELISA, IHC |
| APH1A | 11643-1-AP | Rabbit Poly | ELISA, WB |
| APP | 10524-1-AP | Rabbit Poly | ELISA, WB |
| Arrestin (beta 1) | 2 15361-1-AP | Rabbit Poly | ELISA, IF, IHC, IP, WB |
| Arrestin (beta 2) | 2 10171-1-AP | Rabbit Poly | ELISA, IF, IHC, IP, WB |
| ATR | 3 19787-1-AP | Rabbit Poly | ELISA, WB |
| AXIN1 | 2 16541-1-AP | Rabbit Poly | ELISA, WB |
| AXIN2 | 20540-1-AP | Rabbit Poly | ELISA, WB |
| AXUDI | 18162-1-AP | Rabbit Poly | ELISA, WB |
| BAI2-Specific | 19680-1-AP | Rabbit Poly | ELISA, IHC |

| Antibody Name | Cat. No. | Type | Applications |
|------------------|----------------|-------------|------------------------------------|
| BAI3-Specific | 19789-1-AP | Rabbit Poly | ELISA, WB |
| BARHL2 | 23976-1-AP | Rabbit Poly | ELISA, IF, IHC, WB |
| BAX | 156 50599-2-Ig | Rabbit Poly | ELISA, FC, IF, IHC, IP, WB |
| BAX | 3 60267-1-Ig | Mouse Mono | ELISA, IF, IHC, WB |
| BAX | 11 23931-1-AP | Rabbit Poly | ELISA, IHC, IP, WB |
| BDNF | 5 25699-1-AP | Rabbit Poly | ELISA, IF, IHC, WB |
| BDNF | 17465-1-AP | Rabbit Poly | ELISA |
| beta-Catenin | 43 51067-2-AP | Rabbit Poly | ELISA, IF, IHC, IP, WB |
| BHLHE40 | 17895-1-AP | Rabbit Poly | ELISA, IP, WB |
| BHLHE41 | 12688-1-AP | Rabbit Poly | ELISA, IHC, IP, WB |
| BLOC1S1-specific | 19687-1-AP | Rabbit Poly | ELISA, IHC, IP, WB |
| BMI1 | 4 10832-1-AP | Rabbit Poly | ChIP, CoIP, ELISA, IF, IHC, IP, WB |
| BMI1 | 66161-1-Ig | Mouse Mono | ELISA, IF, IHC, IP, WB |
| BMP2 | 9 18933-1-AP | Rabbit Poly | ELISA, IF, IHC, WB |
| BMP4 | 12492-1-AP | Rabbit Poly | ELISA, IHC, WB |
| BMP7 | 2 12221-1-AP | Rabbit Poly | ELISA, IF, IHC, IP, WB |
| BMP10 | 22858-1-AP | Rabbit Poly | ELISA, WB |
| BMP15 | 18982-1-AP | Rabbit Poly | ELISA, IHC, WB |
| BMPR2 | 14376-1-AP | Rabbit Poly | ELISA, IP, WB |
| BRN2 | 14596-1-AP | Rabbit Poly | ELISA, IHC, WB |
| BRN2-Specific | 18998-1-AP | Rabbit Poly | ELISA, IHC, WB |
| CBX4 | 18544-1-AP | Rabbit Poly | ELISA, IF, WB |
| CDK1 | 16 19532-1-AP | Rabbit Poly | ELISA, IF, IHC, WB |
| CDK1 | 10762-1-AP | Rabbit Poly | ELISA, WB |
| CDKN2A/P16-INK4A | 26 10883-1-AP | Rabbit Poly | ELISA, FC, IF, IHC, IP, WB |

CDKN2D/P19-INK4D
→ EPHA1-specific

More validation images available on our website. 



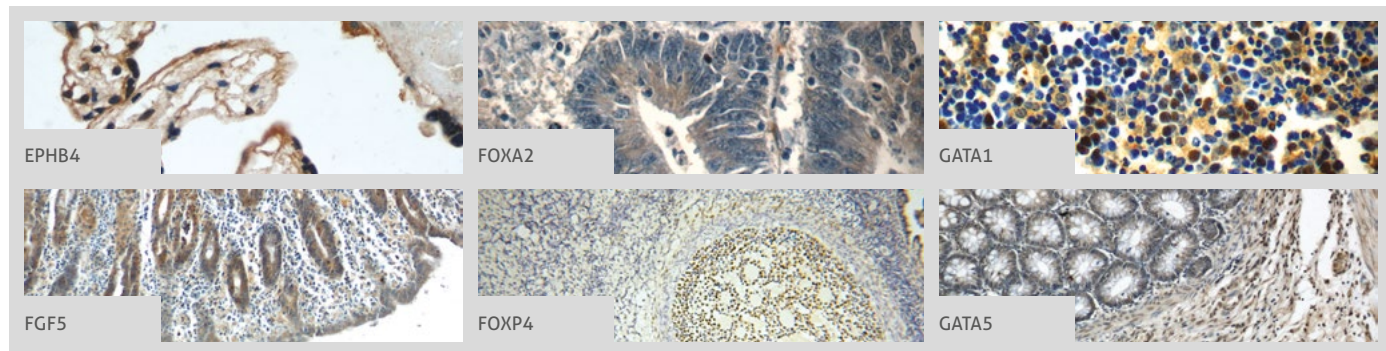
| Antibody Name | Cat. No. | Type | Applications |
|-------------------------|--|-------------|------------------------|
| CDKN2D/P19-INK4D | 10272-2-AP | Rabbit Poly | ELISA, IF, IHC, WB |
| CDO1 | 12589-1-AP | Rabbit Poly | ELISA, IHC, IP, WB |
| CDON | 17634-1-AP | Rabbit Poly | ELISA, WB |
| CDX2 | 60243-1-Ig | Mouse Mono | ELISA, WB |
| CDX4 | 22943-1-AP | Rabbit Poly | ELISA, WB |
| CEBPG | 12997-1-AP | Rabbit Poly | ELISA, IF, WB |
| CK1 delta | 2 14388-1-AP | Rabbit Poly | ELISA, IF, IP, WB |
| CRX | 12047-1-AP | Rabbit Poly | CoIP, ELISA, IP, WB |
| CSNK1A1L | 17125-1-AP | Rabbit Poly | ELISA, IHC, WB |
| CTBP1 | 10972-1-AP | Rabbit Poly | ELISA, IF, IHC, IP, WB |
| CTNBL1 | 13665-1-AP | Rabbit Poly | ELISA, IHC, WB |
| CUX1 | 2 11733-1-AP | Rabbit Poly | ELISA, IF, IP, WB |
| CUX2 | 24902-1-AP | Rabbit Poly | ELISA, WB |
| CXCL8/IL8 | 2 60141-2-Ig | Mouse Mono | ELISA, IHC, WB |
| CXCL8/IL8 | 17038-1-AP | Rabbit Poly | ELISA, IHC |
| CYLD | 3 11110-1-AP | Rabbit Poly | ELISA, IHC, IP, WB |
| Cytokeratin 1-specific | 16848-1-AP | Rabbit Poly | ELISA, IF, IHC, IP, WB |
| Cytokeratin 4 |  16572-1-AP | Rabbit Poly | ELISA, IF, IHC, WB |
| Cytokeratin 6A | 10590-1-AP | Rabbit Poly | ELISA, FC, IF, IHC, WB |
| Cytokeratin 6A-specific | 16853-1-AP | Rabbit Poly | ELISA, IP, WB |
| Cytokeratin 6B | 17391-1-AP | Rabbit Poly | ELISA, IHC, IP, WB |
| Cytokeratin 7 | 22208-1-AP | Rabbit Poly | ELISA, FC, IF, IHC, WB |
| Cytokeratin 7-specific | 6 17513-1-AP | Rabbit Poly | ELISA, IF, IHC, IP, WB |
| Cytokeratin 8 |  10384-1-AP | Rabbit Poly | ELISA, FC, IF, IHC, WB |
| Cytokeratin 8 | 60274-1-Ig | Mouse Mono | ELISA, IHC, WB |
| Cytokeratin 80 | 16835-1-AP | Rabbit Poly | ELISA, IHC, WB |
| Cytokeratin 81 | 11342-1-AP | Rabbit Poly | ELISA, IF, IHC, WB |
| DAAM1 | 14876-1-AP | Rabbit Poly | ELISA, IF, IHC, IP, WB |
| DACH2 | 25219-1-AP | Rabbit Poly | ELISA, WB |
| DDX1 | 2 11357-1-AP | Rabbit Poly | ELISA, IHC, IP, WB |

| Antibody Name | Cat. No. | Type | Applications |
|---------------------|---|-------------|----------------------------|
| DDX25 | 14370-1-AP | Rabbit Poly | ELISA, IP, WB |
| DDX5, p68 | 10804-1-AP | Rabbit Poly | ELISA, IHC, WB |
| Decorin | 14667-1-AP | Rabbit Poly | ELISA, IHC, WB |
| DHH | 13889-1-AP | Rabbit Poly | ELISA, WB |
| DISC1-long-specific | 15500-1-AP | Rabbit Poly | ELISA, IF, IHC, IP, WB |
| DISP1 | 12041-1-AP | Rabbit Poly | ELISA, WB |
| DKK1 | 2 21112-1-AP | Rabbit Poly | ELISA, IF, IHC, WB |
| DKK2 | 21051-1-AP | Rabbit Poly | ELISA, IHC, WB |
| DKK3 | 6 10365-1-AP | Rabbit Poly | ELISA, FC, IF, IHC, WB |
| DLG5 | 15687-1-AP | Rabbit Poly | ELISA, WB |
| DLK1 | 9 10636-1-AP | Rabbit Poly | ELISA, FC, IHC, WB |
| DLK2 | 15680-1-AP | Rabbit Poly | ELISA, WB |
| DLL1-Specific | 20230-1-AP | Rabbit Poly | ELISA, WB |
| DLX1 | 13046-1-AP | Rabbit Poly | ELISA, WB |
| DLX3 | 13261-3-AP | Rabbit Poly | ELISA, IHC, WB |
| DLX4 |  12084-1-AP | Rabbit Poly | ELISA, IF, IHC, WB |
| DLX5 | 2 10592-1-AP | Rabbit Poly | ELISA, IHC, WB |
| DTX1 | 18350-1-AP | Rabbit Poly | ELISA, IF, IHC, WB |
| DTX2 | 18565-1-AP | Rabbit Poly | ELISA, IHC |
| DTX3 | 25304-1-AP | Rabbit Poly | ELISA, IHC, WB |
| DTX3L | 11963-1-AP | Rabbit Poly | ELISA, WB |
| DTX4 | 25222-1-AP | Rabbit Poly | ELISA, IF, WB |
| DVL2 | 12037-1-AP | Rabbit Poly | ELISA, IF, IP, WB |
| DVL3 | 13444-1-AP | Rabbit Poly | ELISA, IF, IP, IHC |
| E-Cadherin |  3 20648-1-AP | Rabbit Poly | ELISA, FC, IF, IHC, WB |
| EDIL3 | 7 12580-1-AP | Rabbit Poly | ELISA, IHC, WB |
| EGFL7 | 19291-1-AP | Rabbit Poly | ELISA, IHC, WB |
| Endoglin/CD105 | 3 10862-1-AP | Rabbit Poly | ELISA, IHC, IP, WB |
| Endostatin | 18301-1-AP | Rabbit Poly | ELISA, IHC, WB |
| EPHA1-specific | 18698-1-AP | Rabbit Poly | ELISA, FC, IF, IHC, IP, WB |

00 This number shows the amount of times our antibody has been cited in a publication.

FOXO1
GSK3B ←

More validation images available on our website.



| Antibody Name | Cat. No. | Type | Applications |
|----------------|------------|-------------|------------------------|
| EPHA4 | 21875-1-AP | Rabbit Poly | ELISA, FC, IF, IP, WB |
| EPHA7 | 13119-1-AP | Rabbit Poly | ELISA |
| EPHA8 | 13724-1-AP | Rabbit Poly | ELISA, FC, WB |
| EPHB4 | 20883-1-AP | Rabbit Poly | ELISA, FC, IHC, WB |
| Ephrin A3 | 12480-1-AP | Rabbit Poly | ELISA, IHC, IP, WB |
| Ephrin A4 | 19685-1-AP | Rabbit Poly | ELISA, WB |
| Ephrin B1 | 12999-1-AP | Rabbit Poly | ELISA, WB |
| ESX1 | 14657-1-AP | Rabbit Poly | ELISA, IP, WB |
| EYA1 | 22658-1-AP | Rabbit Poly | ELISA, IF, IHC, IP, WB |
| EYA2 | 11314-1-AP | Rabbit Poly | ELISA, IF, IHC, WB |
| EYA3 | 21196-1-AP | Rabbit Poly | ELISA, IF, IHC, IP, WB |
| EYA4 | 24691-1-AP | Rabbit Poly | ELISA, IF, WB |
| FGF1 | 17400-1-AP | Rabbit Poly | ELISA, IHC |
| FGF12 | 60152-1-Ig | Mouse Mono | ELISA, WB |
| FGF13 | 13201-1-AP | Rabbit Poly | ELISA, IHC, WB |
| FGF5 | 18171-1-AP | Rabbit Poly | ELISA, IF, IHC, IP, WB |
| FGFR1 | 60325-1-Ig | Mouse Mono | ELISA, FC, IHC, WB |
| FGFR2 | 13042-1-AP | Rabbit Poly | ELISA, IF, IHC, WB |
| FGFR4 | 11098-1-AP | Rabbit Poly | ELISA, IF, IHC, WB |
| FGL2 | 11827-1-AP | Rabbit Poly | ELISA, IF, IHC, WB |
| FOXA1 | 20411-1-AP | Rabbit Poly | ELISA, IHC, WB |
| FOXA2 | 22474-1-AP | Rabbit Poly | ELISA, IF, IHC, IP, WB |
| FOXB1 | 24285-1-AP | Rabbit Poly | ELISA, WB |
| FOXC2 | 23066-1-AP | Rabbit Poly | ELISA, WB |
| FOXD4 | 24835-1-AP | Rabbit Poly | ELISA, WB |
| FOXD4L6 | 22081-1-AP | Rabbit Poly | ELISA, WB |
| FOXE3 | 55301-1-AP | Rabbit Poly | ELISA, WB |
| FOXG1 | 12764-1-AP | Rabbit Poly | ELISA, WB |
| FOXH1-Specific | 20268-1-AP | Rabbit Poly | ELISA, WB |
| FOXJ3 | 21240-1-AP | Rabbit Poly | ELISA, WB |
| FOXM1 | 13147-1-AP | Rabbit Poly | ELISA, IHC, IP, WB |

| Antibody Name | Cat. No. | Type | Applications |
|----------------|------------|-------------|----------------------------|
| FOXO1 | 18592-1-AP | Rabbit Poly | ELISA, FC, IHC, WB |
| FOXO3A | 10849-1-AP | Rabbit Poly | ELISA, IF, IHC, WB |
| FOXO4 | 21535-1-AP | Rabbit Poly | ELISA, IHC, WB |
| FOXP1 | 22051-1-AP | Rabbit Poly | ELISA, WB |
| FOXP2 | 20529-1-AP | Rabbit Poly | ELISA, IP, WB |
| FOXP3 | 22228-1-AP | Rabbit Poly | ELISA, IF, IHC, IP, WB |
| FOXP4 | 16772-1-AP | Rabbit Poly | ELISA, IHC, IP, WB |
| FOXQ1 | 23718-1-AP | Rabbit Poly | ELISA, WB |
| FOXRI | 21942-1-AP | Rabbit Poly | ELISA, WB |
| Frizzled 10 | 18175-1-AP | Rabbit Poly | ELISA, IHC, WB |
| Frizzled 2 | 24272-1-AP | Rabbit Poly | ELISA, WB |
| Frizzled 5 | 21519-1-AP | Rabbit Poly | ELISA, IP, WB |
| Frizzled 7 | 16974-1-AP | Rabbit Poly | ELISA, IP, WB |
| Frizzled 8 | 55093-1-AP | Rabbit Poly | ELISA, WB |
| Frizzled 9 | 13865-1-AP | Rabbit Poly | ELISA, WB |
| FRZB | 12884-1-AP | Rabbit Poly | ELISA, IHC, WB |
| FZD5 | 21519-1-AP | Rabbit Poly | ELISA, IP, WB |
| GATA1 | 60011-1-Ig | Mouse Mono | ELISA, IP, WB |
| GATA1 | 10917-1-AP | Rabbit Poly | ELISA, IHC, IP, WB |
| GATA2 | 11103-1-AP | Rabbit Poly | ELISA, IF, IHC, WB |
| GATA3 | 10417-1-AP | Rabbit Poly | ChIP, ELISA, IHC, WB |
| GATA3 | 22343-1-AP | Rabbit Poly | ELISA, WB |
| GATA4-Specific | 19530-1-AP | Rabbit Poly | ELISA, IHC, IP, WB |
| GATA5 | 55433-1-AP | Rabbit Poly | ELISA, IF, IHC, WB |
| GATA6 | 55435-1-AP | Rabbit Poly | ELISA, WB |
| GESX1 | 55050-1-AP | Rabbit Poly | ELISA, WB |
| GLI2-Specific | 18989-1-AP | Rabbit Poly | ELISA, IF, IHC, WB |
| GLI3-Specific | 19949-1-AP | Rabbit Poly | ELISA, FC, IF, IHC, IP, WB |
| GSK3A | 13419-1-AP | Rabbit Poly | ELISA, IHC, WB |
| GSK3B | 22104-1-AP | Rabbit Poly | ELISA, IF, IHC, IP, WB |

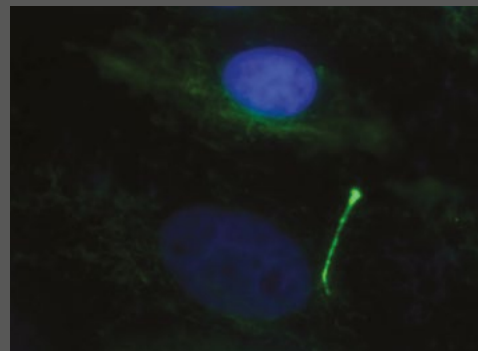
00 This number shows the amount of times our antibody has been cited in a publication.

ANTIBODIES FOR CILIA MARKERS

| Antibody | Cat.No |
|------------------------------|------------|
| IFT B Complex | |
| IFT20 | 13615-1-AP |
| IFT27/RABL4 | 15017-1-AP |
| IFT52 | 17534-1-AP |
| IFT57 | 11083-1-AP |
| IFT80 | 25230-1-AP |
| IFT81 | 10604-2-AP |
| IFT81 | 11744-1-AP |
| IFT88 | 13967-1-AP |
| IFT A Complex | |
| IFT43 | 24338-1-AP |
| IFT122/WDR10 | 19304-1-AP |
| IFT140 | 17460-1-AP |
| IFT144/WDR19 | 13647-1-AP |
| Basal Body | |
| BBS1 | 21118-1-AP |
| BBS2 | 11188-2-AP |
| BBS3/ARL6 | 12676-1-AP |
| BBS4 | 12766-1-AP |
| BBS5 | 14569-1-AP |
| BBS6/MKKS | 13078-1-AP |
| BBS7 | 18961-1-AP |
| BBS8/TTC8 | 12505-1-AP |
| BBS9 | 14460-1-AP |
| BBS10 | 12421-2-AP |
| MKS1/BBS13 | 16206-1-AP |
| SDCCAG8/ BBS16/NPHP10 | 13471-1-AP |
| TRIM32/BBS11 | 10326-1-AP |
| NPHP proteins | |
| ATXN10 | 15693-1-AP |
| NPHP2/Inversin (INVS) | 10585-1-AP |
| NPHP3/MKS7 | 22026-1-AP |
| NPHP4/ Nephrocystin 4 | 13812-1-AP |
| NPHP5/IQCB1 | 15747-1-AP |
| NPHP6/Cep290 | 22490-1-AP |
| NPHP8/ RPGRIPL1 | 55160-1-AP |
| NPHP10/ SDCCAG8/ BBS16 | 13471-1-AP |
| MKS proteins | |
| MKS1 | 16206-1-AP |
| MKS3/TMEM67 | 13975-1-AP |
| MKS4/CEP290 | 22490-1-AP |
| MKS5/ RPGRIPL1/ NPHP10 | 55160-1-AP |
| MKS6/CC2D2A | 22293-1-AP |

| Antibody | Cat.No |
|--|------------|
| Other transition zone proteins | |
| CC2D2A/MKS6 | 22293-1-AP |
| CEP290/NPHP6 | 22490-1-AP |
| MKS1/BBS13 | 16206-1-AP |
| TCTN1 | 15004-1-AP |
| TCTN2/MKS8 | 17053-1-AP |
| TCTN3 | 16085-1-AP |
| TMEM67/MKS3 | 13975-1-AP |
| Centrosome | |
| CENJP | 11517-1-AP |
| Centrin 1 | 12794-1-AP |
| Centrin 2 | 15877-1-AP |
| Centriolin/ CEP110 | 25235-1-AP |
| CEP57 | 24957-1-AP |
| CEP97 | 22050-1-AP |
| CEP152 | 21815-1-AP |
| CEP164 | 22227-1-AP |
| EB1 | 17717-1-AP |
| NUP85/ Pericentrin 1 | 19370-1-AP |
| PCM-1 | 19856-1-AP |
| Other cilia-related proteins | |
| CP110 | 12780-1-AP |
| CSPP1 | 11931-1-AP |
| DISC1 | 15500-1-AP |
| KIF2A | 13105-1-AP |
| KIF3A | 13930-1-AP |
| NDE1 | 10233-1-AP |
| NUP85/ Pericentrin 1 | 19370-1-AP |
| ODF2 | 12058-1-AP |
| RPGR/RP3 | 16891-1-AP |
| septin 2 | 11397-1-AP |
| septin 2 | 60075-1-Ig |
| General cilia marker proteins | |
| AC3 | 19492-1-AP |
| ARL13B | 17711-1-AP |
| Joubert syndrome-related proteins | |
| AHI1 | 22045-1-AP |
| CEP290 | 22490-1-AP |
| TMEM67 | 13975-1-AP |

General cilia markers



Immunofluorescence staining of MDCK cells with anti-acetylated tubulin (TUBA1Aace-40Lys) monoclonal antibody (66200-1-Ig; 1:50), detected with Alexa Fluor 488-conjugated AffiniPure Goat Anti-Mouse secondary antibody (green). Acetylated tubulin locates exclusively to cilia, making this antibody a great immunological tool for control staining of cilia.

Plasma Membrane

IFT Complexes

Cargo

Microtubules

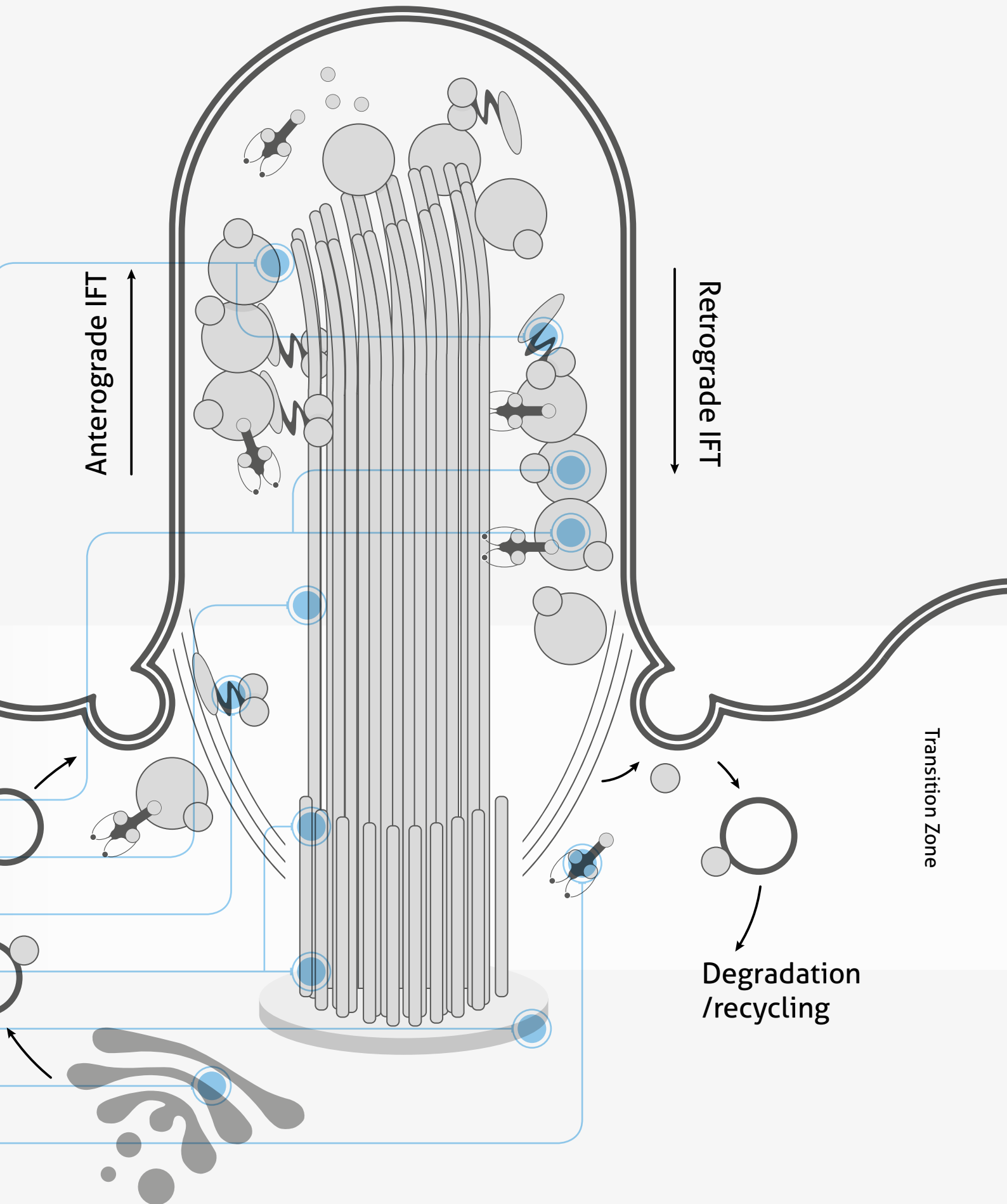
Kinesin

Basal Body

Centriole

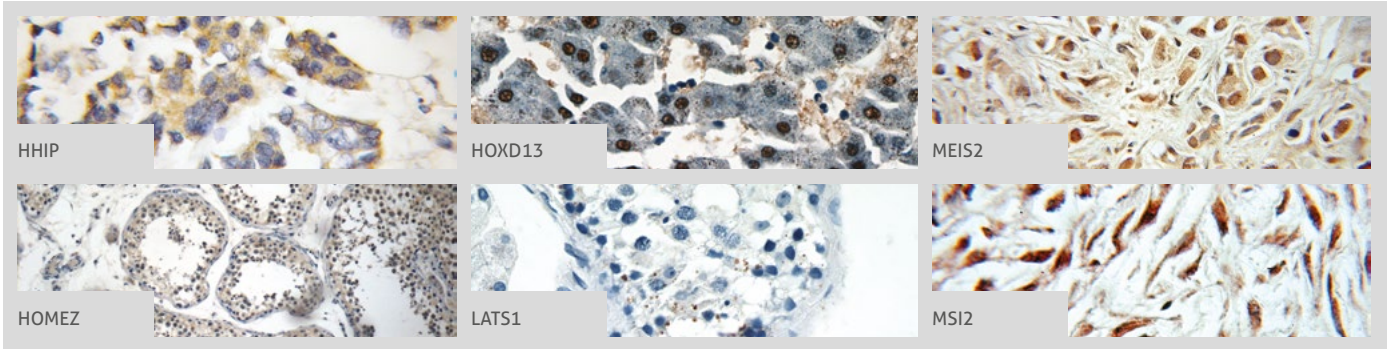
Golgi




Dynein



GSK3B
→ NEDD4

More validation images available on our website. 

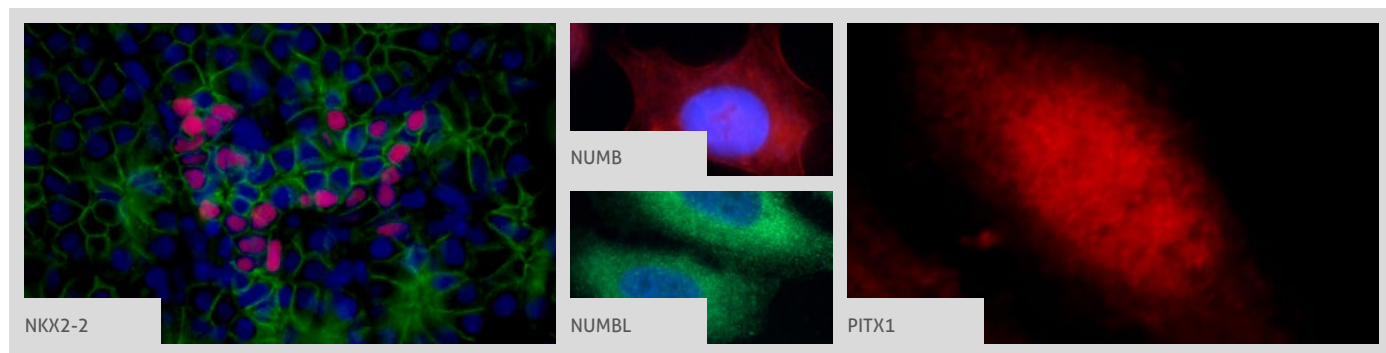


| Antibody Name | Cat. No. | Type | Applications |
|----------------|--|-------------|----------------------------|
| GSK3B | 24198-1-AP | Rabbit Poly | ELISA, FC, IF, IHC, IP, WB |
| GSK3B | 51065-1-AP | Rabbit Poly | ELISA, IF, IHC, IP, WB |
| HAT1 | 2 11432-1-AP | Rabbit Poly | ELISA, IF, IHC, IP, WB |
| HDAC1 | 16160-1-AP | Rabbit Poly | ELISA, IF, IP, WB |
| HDAC2 | 66085-1-Ig | Mouse Mono | ELISA, IF, IHC, WB |
| HESX1 | 17927-1-AP | Rabbit Poly | ELISA, IHC |
| HHIP |  11654-1-AP | Rabbit Poly | ELISA, IHC, WB |
| HLX | 14336-1-AP | Rabbit Poly | ELISA, IHC, WB |
| HMBOX1 | 16123-1-AP | Rabbit Poly | ELISA, IP, WB |
| HNF1A | 22426-1-AP | Rabbit Poly | ELISA, IP, WB |
| HNRNPU (p120) | 16365-1-AP | Rabbit Poly | ELISA, FC, IF, IHC, IP, WB |
| HOMEZ |  23965-1-AP | Rabbit Poly | ELISA, IF, IHC, WB |
| HOPX | 11419-1-AP | Rabbit Poly | ELISA, IP, WB |
| HOXA1 | 2 13513-1-AP | Rabbit Poly | ELISA, IHC, WB |
| HOXA11 | 55495-1-AP | Rabbit Poly | ELISA, WB |
| HOXA2 | 25044-1-AP | Rabbit Poly | ELISA, WB |
| HOXA9 | 18501-1-AP | Rabbit Poly | ELISA, IP, WB |
| HOXB1 | 21653-1-AP | Rabbit Poly | ELISA, WB |
| HOXB1 | 18732-1-AP | Rabbit Poly | ELISA, WB |
| HOXB7 | 12613-1-AP | Rabbit Poly | ELISA, IF, WB |
| HOXC10 | 20632-1-AP | Rabbit Poly | ELISA, IF, WB |
| HOXC11 | 22118-1-AP | Rabbit Poly | ELISA, WB |
| HOXC4 | 14321-1-AP | Rabbit Poly | ELISA, IF, WB |
| HOXC8 | 15448-1-AP | Rabbit Poly | ELISA, WB |
| HOXD11 | 18734-1-AP | Rabbit Poly | ELISA, WB |
| HOXD12 | 18735-1-AP | Rabbit Poly | ELISA, WB |
| HOXD13 |  18736-1-AP | Rabbit Poly | ELISA, IHC, IP, WB |
| HOXD13 | 23520-1-AP | Rabbit Poly | ELISA, IF, WB |
| HOXD4 | 17780-1-AP | Rabbit Poly | ELISA, WB |
| IGF1A-Specific | 6 20214-1-AP | Rabbit Poly | ELISA, IF, IHC, IP, WB |

| Antibody Name | Cat. No. | Type | Applications |
|----------------|---|-------------|------------------------|
| IGF1B-Specific | 20215-1-AP | Rabbit Poly | ELISA, IHC, WB |
| IHH | 13388-1-AP | Rabbit Poly | ELISA, IHC, WB |
| IL-8 | 17038-1-AP | Rabbit Poly | ELISA, IHC |
| Islet 1 | 15661-1-AP | Rabbit Poly | ELISA, IHC, IP, WB |
| JNK | 3 10023-1-AP | Rabbit Poly | ELISA, IF, IHC, IP, WB |
| JNK | 19 51151-1-AP | Rabbit Poly | ELISA, IF, IP, WB |
| KIF3A | 2 13930-1-AP | Rabbit Poly | ELISA, IF, IHC, IP, WB |
| LATS1 |  17049-1-AP | Rabbit Poly | ELISA, IHC, WB |
| LATS2 | 20276-1-AP | Rabbit Poly | ELISA, FC, IF, IHC, WB |
| LEF1 | 2 14972-1-AP | Rabbit Poly | ELISA, IHC, IP, WB |
| LHX5 | 21567-1-AP | Rabbit Poly | ELISA, WB |
| LMX1B | 18278-1-AP | Rabbit Poly | ELISA, IF, WB |
| LRG1 | 5 13224-1-AP | Rabbit Poly | ELISA, IHC, WB |
| LRP5 | 24899-1-AP | Rabbit Poly | ELISA, IF, IHC, WB |
| MAGOH | 4 12347-1-AP | Rabbit Poly | ELISA, IHC, IP, WB |
| MARK3 | 12932-1-AP | Rabbit Poly | ELISA, IP, WB |
| MEF2C-Specific | 18293-1-AP | Rabbit Poly | ELISA, IHC |
| MEIS2 |  11550-1-AP | Rabbit Poly | ELISA, IHC, WB |
| MEIS3 | 12775-1-AP | Rabbit Poly | ELISA, WB |
| MIB2 | 13696-1-AP | Rabbit Poly | ELISA, IP, WB |
| MIXL1 | 22772-1-AP | Rabbit Poly | ELISA, IF, WB |
| MOBKL1A | 2 12790-1-AP | Rabbit Poly | ELISA, IHC, IP, WB |
| MOBKL1B | 11669-1-AP | Rabbit Poly | ELISA, WB |
| MPP3 | 2 14650-1-AP | Rabbit Poly | ELISA, IHC, WB |
| MPP5 | 8 17710-1-AP | Rabbit Poly | ELISA, IF, IHC, IP, WB |
| MPP6 | 11575-1-AP | Rabbit Poly | ELISA, WB |
| MPP7 | 12983-1-AP | Rabbit Poly | ELISA, IF, IHC, IP, WB |
| MSI2 |  2 10770-1-AP | Rabbit Poly | ELISA, IHC, WB |
| NANOG | 4 14295-1-AP | Rabbit Poly | ELISA, IF, IHC, IP, WB |
| NCOR1 | 20018-1-AP | Rabbit Poly | ELISA, IHC, WB |
| NEDD4 | 21698-1-AP | Rabbit Poly | ELISA, IHC, IP, WB |

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More validation images available on our website.



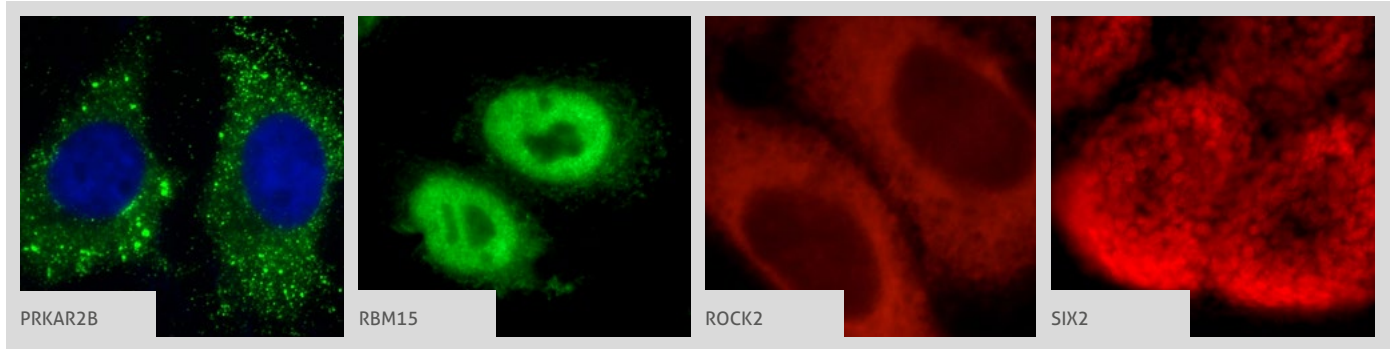
| Antibody Name | Cat. No. | Type | Applications |
|---------------|------------|-------------|------------------------------|
| NEURL | 18898-1-AP | Rabbit Poly | ELISA, IP, WB |
| NEURL2 | 21263-1-AP | Rabbit Poly | ELISA, IHC, WB |
| NEURL3 | 16648-1-AP | Rabbit Poly | ELISA, IP |
| NF2 | 10659-1-AP | Rabbit Poly | ELISA, WB |
| NF2 | 21686-1-AP | Rabbit Poly | ELISA, IF, IHC, IP, WB |
| Nicastrin | 14071-1-AP | Rabbit Poly | ELISA, IF, WB |
| NINJ2 | 14085-1-AP | Rabbit Poly | ELISA, WB |
| NKD2 | 16699-1-AP | Rabbit Poly | ELISA, WB |
| NKX1-2 | 55484-1-AP | Rabbit Poly | ELISA, IHC, WB |
| NKX2-2 | 13013-1-AP | Rabbit Poly | ELISA, IF, WB |
| NKX2-5 | 13921-1-AP | Rabbit Poly | ELISA, WB |
| NKX3-1 | 13069-1-AP | Rabbit Poly | ELISA, WB |
| Noggin | 14772-1-AP | Rabbit Poly | ELISA, IHC, WB |
| NOTCH1 | 20687-1-AP | Rabbit Poly | ELISA, IF, IHC, IP, WB |
| NOTCH3 | 55114-1-AP | Rabbit Poly | ELISA, IHC, IP, WB |
| NUMB | 18701-1-AP | Rabbit Poly | ELISA, FC, IF, IHC, WB |
| NUMB | 55321-1-AP | Rabbit Poly | ELISA, WB |
| NUMB | 60137-1-Ig | Mouse Mono | ELISA, IF, WB |
| NUMBL | 10111-1-AP | Rabbit Poly | ELISA, IF, IHC, IP, WB |
| NUMBL | 66155-1-Ig | Mouse Mono | ELISA, IHC, WB |
| OCT1 | 10387-1-AP | Rabbit Poly | ChIP, ELISA, IF, IHC, IP, WB |
| OCT2 | 10867-2-AP | Rabbit Poly | ELISA, IHC, IP, WB |
| OCT2-Specific | 18996-1-AP | Rabbit Poly | ELISA, IHC, WB |
| OCT4 | 60242-1-Ig | Mouse Mono | ELISA, IHC, WB |
| Oct6-Specific | 18997-1-AP | Rabbit Poly | ELISA, WB |
| ODZ1 | 21696-1-AP | Rabbit Poly | ELISA, WB |
| ONECUT1 | 25137-1-AP | Rabbit Poly | ELISA, IHC, WB |
| ONECUT2 | 21916-1-AP | Rabbit Poly | ELISA, IP, WB |
| OTX2 | 13497-1-AP | Rabbit Poly | ChIP, ELISA, FC, IHC, IP, WB |
| Pan-PAX | 21383-1-AP | Rabbit Poly | ELISA, IF, IHC, IP, WB |


| Antibody Name | Cat. No. | Type | Applications |
|-----------------|------------|-------------|----------------------------|
| PAX1-Specific | 60217-1-Ig | Mouse Mono | ELISA, WB |
| PAX3 | 21386-1-AP | Rabbit Poly | ELISA, IP, WB |
| PAX3 | 51036-2-AP | Rabbit Poly | ELISA, WB |
| PAX4 | 66064-2-Ig | Mouse Mono | ELISA, WB |
| PAX6 | 12323-1-AP | Rabbit Poly | ELISA, FC, IF, IHC, WB |
| PAX7 | 20570-1-AP | Rabbit Poly | ELISA, WB |
| PAX7 | 60236-1-Ig | Mouse Mono | ELISA, IHC |
| PAX8 | 10336-1-AP | Rabbit Poly | ELISA, FC, IF, IHC, IP, WB |
| PAX8 | 60145-4-Ig | Mouse Mono | ELISA, IHC, WB |
| PAX8-Specific | 66073-1-Ig | Mouse Mono | ELISA, IHC, WB |
| PBX1 | 18204-1-AP | Rabbit Poly | ELISA, IF, IP, WB |
| PBX3 | 12571-1-AP | Rabbit Poly | ELISA, IHC, IP, WB |
| PBX4 | 22323-1-AP | Rabbit Poly | ELISA, WB |
| PCAF | 13983-1-AP | Rabbit Poly | ELISA, IHC, IP |
| PCDH1 | 13645-1-AP | Rabbit Poly | ELISA, WB |
| PCDH11Y | 20069-1-AP | Rabbit Poly | ELISA, WB |
| PCDH9 | 25090-1-AP | Rabbit Poly | ELISA, IHC, IP, WB |
| PCDHA2 | 10127-2-AP | Rabbit Poly | ELISA, IP, WB |
| PCDHA3 | 18803-1-AP | Rabbit Poly | ELISA, IHC, WB |
| PCDHA5 | 15270-1-AP | Rabbit Poly | ELISA, IHC, WB |
| PCDHA6 | 12853-1-AP | Rabbit Poly | ELISA, WB |
| PCDHB12 | 14020-1-AP | Rabbit Poly | ELISA, WB |
| PCDHB5 | 19609-1-AP | Rabbit Poly | ELISA, WB |
| PHOX2A | 25804-1-AP | Rabbit Poly | ELISA, IF, WB |
| PHOX2B | 25276-1-AP | Rabbit Poly | ELISA, IF, IHC, WB |
| PITX1 | 10873-1-AP | Rabbit Poly | ELISA, IF, IHC, IP, WB |
| PITX2 | 11106-1-AP | Rabbit Poly | ELISA |
| PKNOX1 | 10614-1-AP | Rabbit Poly | ELISA, IF, IHC, WB |
| plasminogen | 16776-1-AP | Rabbit Poly | ELISA, IF, IHC, IP, WB |
| POU3F3-Specific | 18999-1-AP | Rabbit Poly | ELISA, IHC, WB |
| POU3F4 | 25114-1-AP | Rabbit Poly | ELISA, WB |

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POU4F2
→ **STK4/MST1**

More validation images available on our website. 

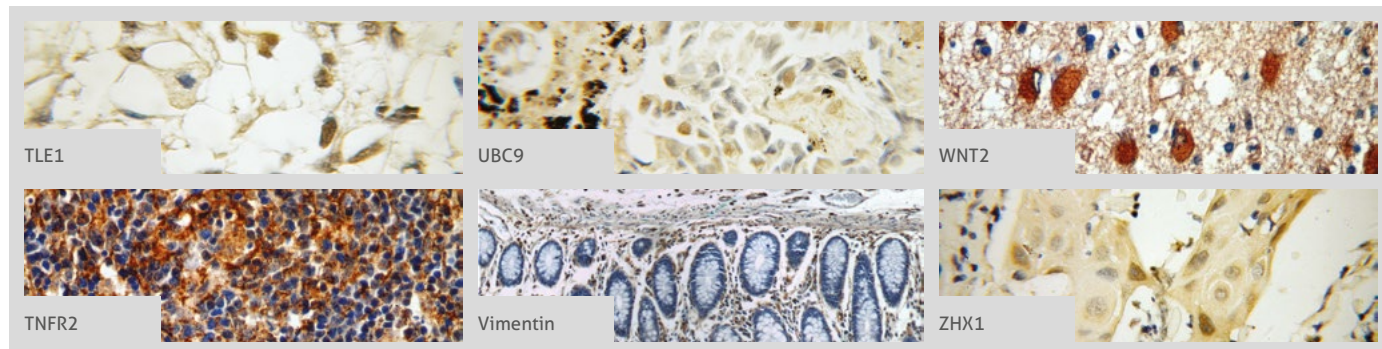


| Antibody Name | Cat. No. | Type | Applications |
|----------------|---|-------------|--------------------------------|
| POU4F2 | 55042-1-AP | Rabbit Poly | ELISA, IF, WB |
| PP2A | 2 10321-1-AP | Rabbit Poly | ELISA, IHC, WB |
| Presenilin-1 | 16163-1-AP | Rabbit Poly | ELISA, IP, WB |
| Presenilin-2 | 16168-1-AP | Rabbit Poly | ELISA, IHC |
| PRICKLE1 | 22589-1-AP | Rabbit Poly | ELISA, IP, WB |
| PRICKLE3 | 19098-1-AP | Rabbit Poly | ELISA, IHC, WB |
| PRKACB | 12232-1-AP | Rabbit Poly | ELISA, IF, IHC, IP, WB |
| PRKAR2B |  20845-1-AP | Rabbit Poly | ELISA, IF, IHC, WB |
| PROX1 | 8 51043-1-AP | Rabbit Poly | ChIP, CoIP, ELISA, IF, IHC, WB |
| PROX1 | 4 11067-2-AP | Rabbit Poly | ChIP, ELISA, FC, IF, IHC, WB |
| PTCH1 | 10 17520-1-AP | Rabbit Poly | ELISA, IHC, WB |
| PTCH2 | 55091-1-AP | Rabbit Poly | ELISA, IHC, WB |
| RAC1 | 20571-1-AP | Rabbit Poly | ELISA, IF |
| RAC1 | 10 24072-1-AP | Rabbit Poly | ELISA, IF, IHC, WB |
| RANKL/OPGL | 23408-1-AP | Rabbit Poly | ELISA, IHC, IP, WB |
| RARB | 14013-1-AP | Rabbit Poly | ELISA, IF, IHC |
| RARG | 2 11424-1-AP | Rabbit Poly | ChIP, ELISA, IP, WB |
| RBM15 |  9 10587-1-AP | Rabbit Poly | ELISA, IF, IHC, IP, WB |
| RBP2 | 18825-1-AP | Rabbit Poly | ELISA, IF, WB |
| RBPJ | 14613-1-AP | Rabbit Poly | ELISA, IHC, IP, WB |
| RBPJ | 66132-1-Ig | Mouse Mono | ELISA, WB |
| RHOA | 22 10749-1-AP | Rabbit Poly | ELISA, IF, IHC, WB |
| RHOB | 4 14326-1-AP | Rabbit Poly | ELISA, IF, IHC, IP, WB |
| RHOF | 12290-1-AP | Rabbit Poly | ELISA, IHC, WB |
| RHOT2 | 2 11237-1-AP | Rabbit Poly | ELISA, IHC, IP, WB |
| RHOXF2 | 13088-1-AP | Rabbit Poly | ELISA, WB |
| ROBO1-Specific | 2 20219-1-AP | Rabbit Poly | ELISA, IP, WB |
| ROBO3 | 11982-1-AP | Rabbit Poly | ELISA, IHC, WB |
| ROBO3-Specific | 20220-1-AP | Rabbit Poly | ELISA, IHC, WB |
| ROBO4-Specific | 20221-1-AP | Rabbit Poly | ELISA, WB |

| Antibody Name | Cat. No. | Type | Applications |
|----------------|--|-------------|---|
| ROCK1 | 7 21850-1-AP | Rabbit Poly | ELISA, IHC, WB |
| ROCK1-Specific | 20247-1-AP | Rabbit Poly | ELISA, IHC, WB |
| ROCK2 |  2 21645-1-AP | Rabbit Poly | ELISA, IF, IHC, IP, WB |
| ROCK2-Specific | 4 20248-1-AP | Rabbit Poly | ELISA, IF, IHC, WB |
| RORA | 2 10616-1-AP | Rabbit Poly | ELISA, WB |
| RORB | 17635-1-AP | Rabbit Poly | ELISA, IHC, IP, WB |
| RORC | 13205-1-AP | Rabbit Poly | ELISA, WB |
| RUNX1 | 25315-1-AP | Rabbit Poly | ELISA, IF, IP, WB |
| RUNX1 | 19555-1-AP | Rabbit Poly | ELISA, IP, WB |
| RUNX2 | 4 20700-1-AP | Rabbit Poly | ELISA, WB |
| SATB1 | 15400-1-AP | Rabbit Poly | ELISA, IP, WB |
| SATB2 | 21307-1-AP | Rabbit Poly | ELISA, WB |
| SEMA3C | 19242-1-AP | Rabbit Poly | ELISA, WB |
| SEMA3D | 13029-1-AP | Rabbit Poly | ELISA, WB |
| SFRP2 | 2 12189-1-AP | Rabbit Poly | ELISA, IHC, WB |
| SFRP4 | 15328-1-AP | Rabbit Poly | ELISA, IHC, IP, WB |
| SH2D2A | 18539-1-AP | Rabbit Poly | ELISA, FC, IHC, WB |
| SHH | 3 20697-1-AP | Rabbit Poly | ELISA, FC, IF, IHC, IP, WB |
| SHOX | 25117-1-AP | Rabbit Poly | ELISA, WB |
| SIX1 | 4 10709-1-AP | Rabbit Poly | ELISA, IF, IHC, IP, WB |
| SIX2 |  75 11562-1-AP | Rabbit Poly | ChIP, ELISA, IF, IHC, IP, Pull-Down, WB |
| SIX4 | 21305-1-AP | Rabbit Poly | ELISA, IF, WB |
| SLIT2-Specific | 20217-1-AP | Rabbit Poly | ELISA, FC, IF, IHC, WB |
| SMOX | 3 15052-1-AP | Rabbit Poly | ELISA, IHC, WB |
| SNAI1 | 16 13099-1-AP | Rabbit Poly | ELISA, IHC, IP, WB |
| SNAI2 | 4 12129-1-AP | Rabbit Poly | ELISA, IHC, WB |
| SOX6 | 14010-1-AP | Rabbit Poly | ELISA, WB |
| SOX8 | 20627-1-AP | Rabbit Poly | ELISA, IHC, WB |
| STK3/MST2 | 12097-1-AP | Rabbit Poly | ELISA, IF, IHC, WB |
| STK4/MST1 | 22245-1-AP | Rabbit Poly | ELISA, IF, IHC, IP, WB |

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More validation images available on our website.



| Antibody Name | Cat. No. | Type | Applications |
|----------------------|---------------|-------------|------------------------------|
| SUFU | 10836-1-AP | Rabbit Poly | ELISA, IF, IHC |
| SUMO1 | 10329-1-AP | Rabbit Poly | ELISA, WB |
| SUMO2/3 | 10947-1-AP | Rabbit Poly | ELISA, IF, IHC, WB |
| TAB1 | 14819-1-AP | Rabbit Poly | ELISA, IP, WB |
| TAB2 | 14410-1-AP | Rabbit Poly | ELISA, FC, IF, IHC, IP, WB |
| Tankyrase | 18030-1-AP | Rabbit Poly | ELISA, IF, IP, WB |
| TAZ | 2 23306-1-AP | Rabbit Poly | ELISA, IHC, IP, WB |
| TCF7L1 | 14519-1-AP | Rabbit Poly | ELISA, IF, IHC, WB |
| TCF7L2 | 3 13838-1-AP | Rabbit Poly | ELISA, IP, WB |
| TEAD1 | 2 13283-1-AP | Rabbit Poly | ELISA, IP, WB |
| TEAD3 | 13120-1-AP | Rabbit Poly | ELISA, WB |
| TEM1 | 2 18160-1-AP | Rabbit Poly | ELISA, FC, IF, IHC, WB |
| TGF-beta 1 | 25 18978-1-AP | Rabbit Poly | ELISA, IF, IHC, WB |
| TGF-beta 2 -Specific | 3 19999-1-AP | Rabbit Poly | ELISA, IF, IHC, WB |
| TGF-beta 3 | 3 18942-1-AP | Rabbit Poly | ELISA, IHC, WB |
| TGFBR3-Specific | 20000-1-AP | Rabbit Poly | ELISA, FC, WB |
| TGIF2 | 11522-1-AP | Rabbit Poly | ELISA, IF, WB |
| TGIF2LX | 17405-1-AP | Rabbit Poly | ELISA, WB |
| TLE1 | 11284-1-AP | Rabbit Poly | ELISA, IF, IHC, WB |
| TLE3 | 4 11372-1-AP | Rabbit Poly | ChIP, ELISA, IF, IHC, IP, WB |
| TLE3 | 22094-1-AP | Rabbit Poly | ELISA, IF, IHC, IP, WB |
| TLE3 | 66083-1-Ig | Mouse Mono | ELISA, IHC, IP, WB |
| TNFR1 | 5 21574-1-AP | Rabbit Poly | ELISA, FC, IF, IHC, WB |
| TNFR1 | 60192-1-Ig | Mouse Mono | ELISA, FC, IHC, WB |
| TNFR2 | 19272-1-AP | Rabbit Poly | ELISA, FC, IF, IHC, IP, WB |
| TRIM69 | 12951-1-AP | Rabbit Poly | ELISA, IHC, WB |
| TSHZ3 | 25018-1-AP | Rabbit Poly | ELISA, WB |
| TTF1 | 66034-1-Ig | Mouse Mono | ELISA, IHC, WB |
| UBC9 | 10070-1-AP | Rabbit Poly | ELISA, IHC, WB |
| UBC9 | 10224-1-AP | Rabbit Poly | ELISA, IHC, WB |

| Antibody Name | Cat. No. | Type | Applications |
|---------------|---------------|-------------|----------------------------|
| UBC9 | 51018-2-AP | Rabbit Poly | ELISA, IHC, IP, WB |
| UBC9 | 60201-1-Ig | Mouse Mono | ELISA, IHC, WB |
| UBC9-Specific | 14837-1-AP | Rabbit Poly | ELISA, FC, IF, IHC, WB |
| VEGF | 52 19003-1-AP | Rabbit Poly | ELISA, IF, IHC, IP, WB |
| VEGFR-1/FLT-1 | 3 13687-1-AP | Rabbit Poly | ELISA, FC, IF, IP, WB |
| VEGFR3 | 20712-1-AP | Rabbit Poly | ELISA, WB |
| Vimentin | 65 10366-1-AP | Rabbit Poly | ELISA, FC, IF, IHC, WB |
| VSX2 | 25825-1-AP | Rabbit Poly | ELISA, IHC, WB |
| WEE2/WEE1B | 55119-1-AP | Rabbit Poly | ELISA, WB |
| Willin/FRMD6 | 21039-1-AP | Rabbit Poly | ELISA, FC, IHC, WB |
| WNT2 | 4 11160-1-AP | Rabbit Poly | ELISA, IHC, WB |
| WNT3 | 17983-1-AP | Rabbit Poly | ELISA, FC, IP, WB |
| WNT3A | 21414-1-AP | Rabbit Poly | ELISA, IHC |
| WNT5A-B | 55184-1-AP | Rabbit Poly | ELISA, IHC, WB |
| WNT6 | 24201-1-AP | Rabbit Poly | ELISA, IHC, WB |
| WNT7A | 2 10605-1-AP | Rabbit Poly | ELISA, FC, IF, IHC, IP, WB |
| WT1 | 12609-1-AP | Rabbit Poly | ELISA, IP, WB |
| YAP1 | 12 13584-1-AP | Rabbit Poly | ELISA, FC, IF, IHC, IP, WB |
| ZHX1 | 13903-1-AP | Rabbit Poly | ELISA, IHC, IP, WB |
| ZHX2 | 20136-1-AP | Rabbit Poly | ELISA, IP, WB |

00 This number shows the amount of times our antibody has been cited in a publication.

CONTACT US

Proteintech Group *US Head Office*

PHONE 1 (888) 4PTGLAB
(1-888-478-4522)
(toll free in USA),
or 1(312) 455-8498
(outside USA)

FAX 1 (312) 455-8408

ADDRESS Proteintech Group, Inc.
5400 Pearl Street, Suite 300,
Rosemont, IL 60018, USA

EMAIL proteintech@ptglab.com

Proteintech Europe *United Kingdom*

PHONE +44 (161) 8393007

FAX +44 (161) 2413103

ADDRESS Proteintech Europe, Ltd.
4th Floor,
196 Deansgate,
Manchester, M3 3WF

EMAIL europe@ptglab.com

Proteintech Europe *Germany*

EMAIL germany@ptglab.com
Sales and technical support only.

Proteintech *China Office*

PHONE 027-87531629
or 4006-900-926

FAX 027-87531627

ADDRESS Wuhan Sanying Biotechnologies
D3-3, No.666 Gaoxin Avenue,
Wuhan East Lake Hi-tech Development Zone
Wuhan, Hubei, P.R.C

EMAIL Proteintech-CN@ptglab.com

Support

Available 24 hours via Live Chat and 9-5 (CDT) via phone.

Email support also available.

LIVE CHAT
www.ptglab.com

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