abcam

ab316318

Anti-PYGO2 antibody [EPR27168-186]

Recombinant | RabMAb | 20ul selling size

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.2 - 7.4 Preservative: 0.01% Sodium azide Constituents: PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Clone number	EPR27168-186
Purification technique	Affinity purification Protein A
Concentration	0.513 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

WB

Tested

Species	Transfected cell lysate - Human
Dilution info	1/1000
Notes	-

Species	Human

Dilution info	1/1000
Notes	-

Species	Mouse
Dilution info	1/1000
Notes	-

Species	Rat
Dilution info	1/1000
Notes	-

ICC/IF

Tested

Species	Human
Dilution info	1/100
Notes	-

Expected

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

Not recommended

Species	Transfected cell lysate - Human
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	1/500

Notes	-

Expected

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

Not recommended

Species	Transfected cell lysate - Human
Dilution info	-
Notes	-

IHC-P

Tested

Species	Human
Dilution info	1/5000
Notes	Perform heat-mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

Expected

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

Not recommended

Species	Transfected cell lysate - Human
Dilution info	-
Notes	-

IP

Not recommended

Species	Human, Mouse, Rat, Transfected cell lysate - Human
Dilution info	-
Notes	-

Target data

See full target information PYGO2

Function	Involved in signal transduction through the Wnt pathway.

Storage

Shipped at conditions	Conditional Ambient
Appropriate short-term storage duration	1-2 weeks
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

Notes

Patented technology
Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb® patents.

What are the advantages of a recombinant monoclonal antibody?
This product is a recombinant monoclonal antibody, which offers several advantages including:

- High batch-to-batch consistency and reproducibility
- Improved sensitivity and specificity
- Long-term security of supply
- Animal-free batch production

For more information, read more on recombinant antibodies.

Supplementary info

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

Activity summary	PYGO2 also known as Pygopus family PHD finger 2 is a nuclear protein involved in gene transcription. This protein has a molecular mass of approximately 45 kDa. PYGO2 localizes mainly in the nucleus and it is expressed in several tissues particularly in those with high proliferation demands like embryonic tissues or certain tumor cells. Its role in transcription is linked to its ability to bind to histones and recruit other transcriptional cofactors facilitating the assembly of transcriptional machinery at specific genomic sites.
Biological function summary	This protein plays a significant role in gene expression regulation functioning as a component of the Wnt signaling pathway. PYGO2 works in a transcriptional complex with other proteins including BCL9 to regulate gene transcription that is important for cell proliferation and differentiation. The interaction with BCL9 is critical for stabilizing the multiprotein complexes involved in transcriptional activation indicating the importance of PYGO2 in developmental processes.
Pathways	PYGO2 serves a critical function in the canonical Wnt signaling pathway which is vital in controlling the expression of target genes related to cell growth and development. The Wnt pathway requires the cooperation of PYGO2 with LEF/TCF transcription factors and β-catenin allowing them to operate as an activated complex. The interaction with β-catenin highlights PYGO2's role in translating extracellular Wnt signals into gene transcription responses within the cell.
Associated diseases and disorders	PYGO2 has associations with several cancer types particularly those with aberrant Wnt signaling such as colorectal cancer. Disruptions in PYGO2 expression or function can lead to dysregulation of gene expression linked to tumorigenesis. Another potential link exists with breast cancer where altered expression of PYGO2 and its interaction with β-catenin can influence cancer cell proliferation and invasion. Understanding the specific role of PYGO2 in these contexts might offer insights into potential therapeutic targets for cancer treatment.

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

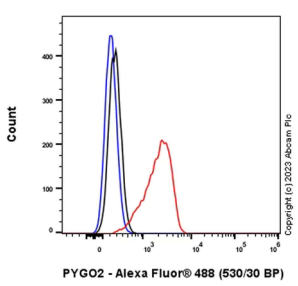
We do not recommend this combination. It is not covered by our product promise.

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.

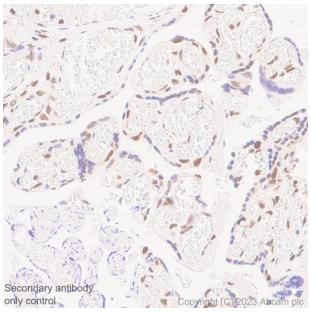
9 product images



Flow Cytometry (Intracellular) - Anti-PYGO2 antibody [EPR27168-186] (ab316318)

Flow cytometric analysis of 4% paraformaldehyde fixed 90% methanol permeabilized HeLa (human cervical adenocarcinoma epithelial cell) cells labelling PYGO2 with ab316318 at 1/500 dilution (0.1 ug)/Red compared with a Rabbit monoclonal IgG (ab172730) (Black) isotype control and an unlabelled control (cells without incubation with primary antibody and secondary antibody) (Blue).

Goat Anti-Rabbit IgG (Alexa Fluor® 488, ab150081) at 1/5000 dilution was used as the secondary antibody.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-PYGO2 antibody [EPR27168-186] (ab316318)

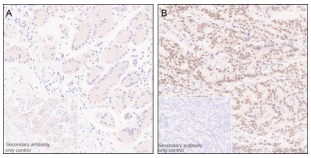
Immunohistochemical analysis of paraffin-embedded Human placenta tissue labeling PYGO2 with ab316318 at 1/5000 (0.103 ug/ml) dilution, followed by a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection).

Nuclear staining on human placenta.
The section was incubated with ab316318 for 30 mins at room temperature.
The immunostaining was performed on a Leica Biosystems BOND® RX instrument.

Counterstained with Hematoxylin.

Secondary antibody only control: Secondary antibody is a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection).

Heat mediated antigen retrieval was performed with Tris-EDTA buffer (pH 9.0, Epitope Retrieval Solution2) for 20 mins



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-PYGO2 antibody [EPR27168-186] (ab316318)

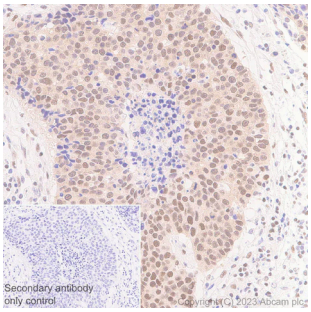
Immunohistochemical analysis of paraffin-embedded Panel A. Human normal stomach Panel B. Human gastric cancer tissue labeling PYGO2 with ab316318 at 1/5000 (0.103 ug/ml) dilution, followed by a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection).

Nearly no staining on human normal stomach (Panel. A), nuclear staining on human gastric cancer (Panel. B) (PMID: 23865714).
The two images come from same donor's tumour and adjacent normal.
The section was incubated with ab316318 for 30 mins at room temperature.
The immunostaining was performed on a Leica Biosystems BOND® RX instrument.

Counterstained with Hematoxylin.

Secondary antibody only control: Secondary antibody is a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection).

Heat mediated antigen retrieval was performed with Tris-EDTA buffer (pH 9.0, Epitope Retrieval Solution2) for 20 mins



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-PYGO2 antibody [EPR27168-186] (ab316318)

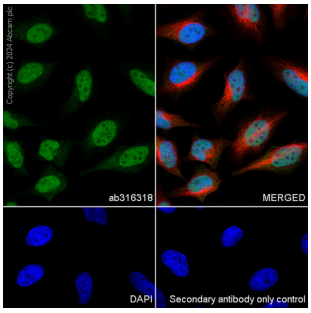
Immunohistochemical analysis of paraffin-embedded Human lung cancer tissue labeling PYGO2 with ab316318 at 1/5000 (0.103 ug/ml) dilution, followed by a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection).

Positive staining on human lung cancer (PMID: 23865714)
The section was incubated with ab316318 for 30 mins at room temperature.
The immunostaining was performed on a Leica Biosystems BOND® RX instrument.

Counterstained with Hematoxylin.

Secondary antibody only control: Secondary antibody is a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection).

Heat mediated antigen retrieval was performed with Tris-EDTA buffer (pH 9.0, Epitope Retrieval Solution2) for 20 mins



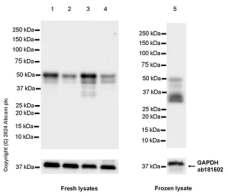
Immunocytochemistry/ Immunofluorescence - Anti-PYGO2 antibody [EPR27168-186] (ab316318)

Immunofluorescent analysis of 4% Paraformaldehyde-fixed, 0.1% TritonX-100 permeabilized HeLa (human cervical adenocarcinoma epithelial cell) cells labelling PYGO2 with ab316318 at 1/100 (5.13 ug/ml) dilution, followed by ab150081 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) preadsorbed antibody at 1/1000 (2 ug/ml) dilution (Green).

Confocal image showing mainly nuclear staining in HeLa cell line.
Image was taken with a confocal microscope(Leica-Microsystems, TCS SP8).

ab195889 Anti-alpha Tubulin mouse monoclonal antibody - Microtubule Marker (Alexa Fluor® 594) was used to counterstain tubulin at 1/200 (2.5ug/ml) dilution (Red). The Nuclear counterstain was DAPI (Blue).

Secondary antibody only control: Secondary antibody is ab150081 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) preadsorbed at 1/1000 (2 ug/ml) dilution.



Western blot - Anti-PYGO2 antibody [EPR27168-186] (ab316318)

PYGO2 Western blot staining using rabbit Anti-PYGO2 antibody

In lane 5, the lysate was stored at -80°C prior to Western Blotting. In lane 1, 2, 3 & 4, lysates were freshly made and used for Western Blotting immediately to minimize protein degradation

In Western blot, Anti-GAPDH antibody [EPR16891] - Loading Control (ab181602) staining at 1/200000 dilution.

Exposure time: Lane 1-4: 26 seconds; Lane 5: 37 seconds

All lanes:
Western blot - Anti-PYGO2 antibody [EPR27168-186] (ab316318) at 1/1000 dilution

Lane 1:
HeLa (human cervical adenocarcinoma epithelial cell) whole cell lysate at 20 µg

Lane 2:
293T (human embryonic kidney epithelial cell) whole cell lysate at 20 µg

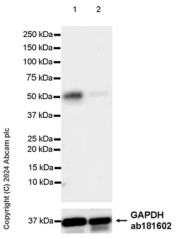
Lanes 3 and 5:
NIH/3T3 (mouse embryonic fibroblast) whole cell lysate at 20 µg

Lane 4:
PC-12 (rat adrenal gland pheochromocytoma cell) whole cell lysate at 20 µg

Secondary

All lanes:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/100000 dilution

Observed band size: 50 kDa, 36 kDa



Western blot - Anti-PYGO2 antibody [EPR27168-186] (ab316318)

PYGO2 Western blot staining using rabbit Anti-PYGO2 antibody

Lysates were freshly made and used for Western blotting immediately to minimize protein degradation.

In Western blot, Anti-GAPDH antibody [EPR16891] - Loading Control (ab181602) staining at 1/200000 dilution.

All lanes:
Western blot - Anti-PYGO2 antibody [EPR27168-186] (ab316318) at 1/1000 dilution

Lane 1:
HeLa (human cervix adenocarcinoma epithelial cell) transfected with scrambled siRNA control whole cell lysate at 20 µg

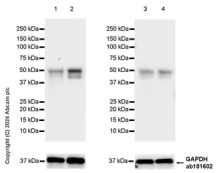
Lane 2:
HeLa transfected with siRNA specifically targeting human PYGO2 whole cell lysate at 20 µg

Secondary

All lanes:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/100000 dilution

Observed band size: 50 kDa, 36 kDa

Exposure time: 92s



Western blot - Anti-PYGO2 antibody [EPR27168-186] (ab316318)

PYGO2 Western blot staining using rabbit Anti-PYGO2 antibody

Lysates were freshly made and used for Western blotting immediately to minimize protein degradation.

In Western blot, Anti-GAPDH antibody [EPR16891] - Loading Control (ab181602) staining at 1/200000 dilution.

All lanes:
Western blot - Anti-PYGO2 antibody [EPR27168-186] (ab316318) at 1/1000 dilution

Lane 1:
Mouse liver tissue lysate at 20 µg

Lane 2:
Mouse testis tissue lysate at 20 µg

Lane 3:
Rat liver tissue lysate at 20 µg

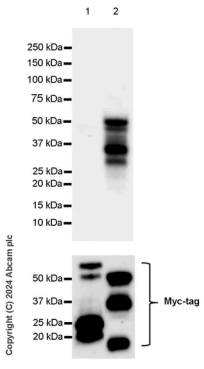
Lane 4:
Rat testis tissue lysate at 20 µg

Secondary

All lanes:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/100000 dilution

Observed band size: 50 kDa, 36 kDa

Exposure time: 103s



Western blot - Anti-PYGO2 antibody [EPR27168-186] (ab316318)

PYGO2 Western blot staining using rabbit Anti-PYGO2 antibody

In Western blot, Anti-Myc tag mAb staining at 1/10000 dilution.

All lanes:
Western blot - Anti-PYGO2 antibody [EPR27168-186] (ab316318) at 1/1000 dilution

Lane 1:
293T (human embryonic kidney epithelial cell) cells transfected with human PYGO1 expression vector containing a myc-His-tag®, whole cell lysate at 10 µg

Lane 2:
293T cells transfected with human PYGO2 expression vector containing a myc-His-tag®, whole cell lysate at 10 µg

Secondary

All lanes:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/100000 dilution

Observed band size: 50 kDa

Exposure time: 10s

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