abcam

# ab235444

# Anti-Quiescin Q6 antibody [EPR21866]

Recombinant | RabMAb

## 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** | EPR21866 |
| **Purification technique** | Affinity purification Protein A |
| **Concentration** | 0.591 mg/mL The concentration of this product may be batch-dependent<br>Batch concentration finder → |

## Reactivity data

### IP

#### Tested

| | |
|---|---|
| **Species** | Human |
| **Dilution info** | 1/30 |
| **Notes** | - |

### WB

### Tested

| | |
|---|---|
| **Species** | Human |
| **Dilution info** | 1/1000 |
| **Notes** | - |

## Flow Cyt (Intra)

### Tested

| | |
|---|---|
| **Species** | Human |
| **Dilution info** | 1/60 |
| **Notes** | - |

## IHC-P

### Tested

| | |
|---|---|
| **Species** | Human |
| **Dilution info** | 1/200 |
| **Notes** | - |

## Target data

See full target information QSOX1

**Function** Catalyzes the oxidation of sulfhydryl groups in peptide and protein thiols to disulfides with the reduction of oxygen to hydrogen peroxide (PubMed:17331072, PubMed:18393449, PubMed:23704371, PubMed:23867277, PubMed:30367560). Plays a role in disulfide bond formation in a variety of extracellular proteins (PubMed:17331072, PubMed:22801504, PubMed:23867277, PubMed:30367560). In fibroblasts, required for normal incorporation of laminin into the extracellular matrix, and thereby for normal cell-cell adhesion and cell migration (PubMed:23704371, PubMed:23867277, PubMed:30367560).

## 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** | Quiescin Q6 also known as QSOX1 is an enzyme belonging to the Quiescin-sulfhydryl oxidase family. It functions by catalyzing the oxidation of sulfhydryl groups to form disulfide bonds in proteins an important step for proper protein folding. QSOX1 has a molecular mass between 60-100 kDa depending on its isoform. This protein is expressed in various tissues with high levels present in the pancreas placenta and some cancer cells suggesting a role in tissue specific processes and during certain pathological conditions. |
| **Biological function summary** | Quiescin Q6 influences cell growth and differentiation. The protein is involved in extracellular matrix organization where it plays a role in maintaining the stability and function of connective tissues. It doesn't typically assemble into large complexes but interacts with substrates directly facilitating the formation of stable proteins. QSOX1 ensures that proteins achieve their functional conformation by reshaping their disulfide bonds efficiently aiding in the cellular machinery of protein conformation. |

| | |
|---|---|
| **Pathways** | The functions of Quiescin Q6 intersect with the protein folding and oxidative stress response pathways. It relates closely to the endoplasmic reticulum protein folding pathway due to its role in disulfide bonding as well as to the antioxidant defense pathway where it mediates protection against oxidative stress. Its activity connects with proteins such as protein disulfide isomerase (PDI) which also participate in creating disulfide bonds but at different stages or cellular locations showcasing distinct but cooperative functions within these pathways. |
| **Associated diseases and disorders** | Quiescin Q6 has been linked to cancer progression and fibrosis. Its overexpression has been observed in various tumors indicating a potential role in tumor growth and metastasis. In fibrotic diseases elevated levels of QSOX1 contribute to excessive extracellular matrix deposition. It connects with the transforming growth factor-beta (TGF-beta) pathway a critical regulator in fibrosis and cancer where QSOX1's regulation of matrix composition may influence TGF-beta signaling. Understanding these connections offers potential for developing targeted therapeutic strategies in treating related diseases. |

## 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**

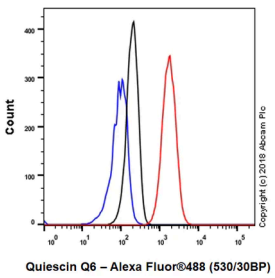
We do not recommend this combination. It is not covered by our product promise.

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.

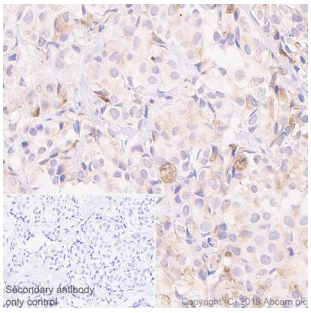
## 6 product images




## Flow Cytometry (Intracellular) - Anti-Quiescin Q6 antibody [EPR21866] (ab235444)

Quiescin Q6 Flow Cytometry (Intracellular) staining using rabbit Anti-Quiescin Q6 antibody

Intracellular flow cytometric analysis of 4% paraformaldehyde-fixed, 90% methanol-permeabilized MDA-MB-231 (Human breast adenocarcinoma cell line) cells labeling Quiescin Q6 with ab235444 at 1/60 (red) compared with a Rabbit monoclonal IgG (ab172730) (black) and an unlabeled control (cells without incubation with primary antibody and secondary antibody) (blue). Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) (ab150077), at 1/2000 dilution was used as the secondary antibody.

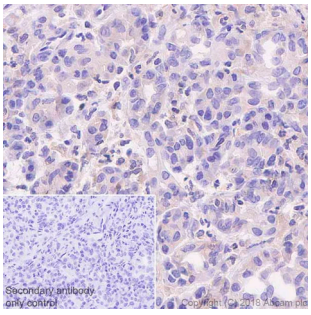



## Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Quiescin Q6 antibody [EPR21866] (ab235444)

Quiescin Q6 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-Quiescin Q6 antibody

Immunohistochemical analysis of paraffin-embedded human breast ductal cancer tissue labeling Quiescin Q6 with ab235444 at 1/200 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) ready to use. Cytoplasmic staining in human breast ductal cancer (PMID: 23536962) is observed. Counter stained with hematoxylin.
Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (HRP) ready to use.

Heat-mediated antigen retrieval using ab93684 (Tris/EDTA buffer, pH 9.0).

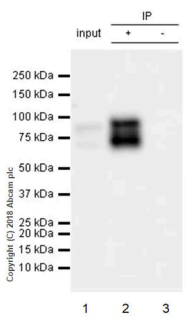



## Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Quiescin Q6 antibody [EPR21866] (ab235444)

Quiescin Q6 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-Quiescin Q6 antibody

Immunohistochemical analysis of paraffin-embedded human pancreatic cancer tissue labeling Quiescin Q6 with ab235444 at 1/200 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) ready to use. Cytoplasmic staining in human pancreatic cancer (PMID: 19795908, 21989104) is observed. Counter stained with hematoxylin.
Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (HRP) ready to use.

Heat-mediated antigen retrieval using ab93684 (Tris/EDTA buffer, pH 9.0).




## Immunoprecipitation - Anti-Quiescin Q6 antibody [EPR21866] (ab235444)

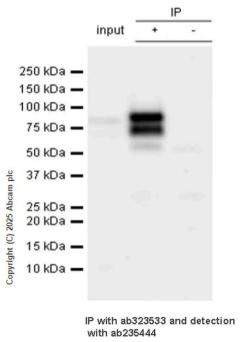
Quiescin Q6 was immunoprecipitated from 0.35 mg of MDA-MB-231 (Human breast adenocarcinoma cell line) whole cell lysate with ab235444 at 1/30 dilution. Western blot was performed from the immunoprecipitate using ab235444 at 1/1000 dilution. VeriBlot for IP Detection Reagent (HRP) (ab131366), was used for detection at 1/5000 dilution.
**Lane 1:** MDA-MB-231 whole cell lysate 10 µg (Input).
**Lane 2:** ab235444 IP in MDA-MD-231 whole cell lysate.
**Lane 3:** Rabbit monoclonal IgG (ab172730) instead of ab235444 in MDA-MD-231 whole cell lysate.

**Blocking/Dilution buffer:** 5% NFDM/TBST.
**Exposure time:** 30 seconds.

Quiescin Q6 has two isoforms due to expression from a long (Quiescin Q6-L) and a short (Quiescin Q6-S) transcript.
All lanes:
Immunoprecipitation - Anti-Quiescin Q6 antibody [EPR21866] (ab235444)

Predicted band size: 83 kDa

Observed band size: 65 kDa, 83 kDa



IP with ab323533 and detection with ab235444

## Immunoprecipitation - Anti-Quiescin Q6 antibody [EPR21866] (ab235444)

Quiescin Q6 was immunoprecipitated from 0.35 mg ab323533 at 1/30 IP in PANC-1(human pancreatic epithelioid carcinoma epithelial cell) whole cell lysate with ab323533 at 1/30 dilution (2ug in 0.35mg lysates). Western blot was performed on the immunoprecipitate using ab323533 at 1/1000 dilution.

Blocking and dilution buffer and concentration: 5% NFDM/TBST

The IP experiment was performed by ab323533 using PANC-1 lysate. The blot was probed by another Anti-Quiescin Q6 antibody [EPR21866] (ab235444)(1:1000).

All lanes:
Immunoprecipitation - Anti-Quiescin Q6 antibody [EPR25653-56] (ab323533) at 1/1000 dilution

Lane 1:
PANC-1(human pancreatic epithelioid carcinoma epithelial cell) whole cell lysate at 10 µg

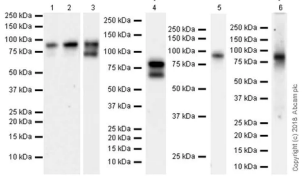
Lane 2:
ab323533 at 1/30 IP in PANC-1(human pancreatic epithelioid carcinoma epithelial cell) whole cell lysate at 10 µg

Lane 3:
Rabbit monoclonal IgG (ab172730) instead of ab323533 in PANC-1 whole cell lysate at 10 µg

Secondary

All lanes:
Immunoprecipitation - VeriBlot for IP Detection Reagent (HRP) (ab131366) at 1/5000 dilution

Exposure time: 180s




## Western blot - Anti-Quiescin Q6 antibody [EPR21866] (ab235444)

**Blocking/Dilution buffer:** 5% NFDM/TBST.
**Exposure times:** Lanes 1-3 & 5: 3 minutes, Lane 4: 37 seconds, Lane 6: 103 seconds.

Quiescin Q6 has two isoforms due to expression from a long (Quiescin Q6-L) and a short (Quiescin Q6-S) transcript.

All lanes:
Western blot - Anti-Quiescin Q6 antibody [EPR21866] (ab235444) at 1/1000 dilution

Lane 1:
BxPC-3 (human pancreas adenocarcinoma cell line) whole cell lysate at 20 µg

Lane 2:
MCF7 (human breast adenocarcinoma cell line) whole cell lysate at 20 µg

Lane 3:
MDA-MB-231 (human breast adenocarcinoma cell line) whole cell lysate at 20 µg

Lane 4:
PANC-1 (human pancreatic epithelial cancinoma cell line) whole cell lysate at 10 µg

Lane 5:
T-47D (Human ductal breast epithelial tumor cell line) whole cell lysate at 10 µg

Lane 6:
Human breast cancer lysate at 10 µg

Secondary

Lanes 1 - 5:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/100000 dilution

Lane 6:
Western blot - VeriBlot for IP Detection Reagent (HRP) (ab131366) at 1/1000 dilution

Predicted band size: 83 kDa

Observed band size: 67 kDa, 83 kDa

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