abcam

ab92377

Anti-Estrogen Inducible Protein pS2 antibody [EPR3972]

Recombinant | RabMAb

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.2 - 7.4 Preservative: 0.01% Sodium azide Constituents: PBS, 50% Tissue culture supernatant, 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	EPR3972
Purification technique	Affinity purification Protein A
Dissociation constant	4.7×10^{-11} M
Concentration	0.173 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IHC-P

Tested

Species	Human
Dilution info	1/100 - 1/250

Notes	-

IP

Tested

Species	Human
Dilution info	1/10 - 1/100
Notes	-

WB

Tested

Species	Human
Dilution info	1/1000 - 1/10000
Notes	-

ICC/IF

Tested

Species	Human
Dilution info	1/100 - 1/250
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	-
Notes	-

Target data

See full target information TFF1

Function	Stabilizer of the mucous gel overlying the gastrointestinal mucosa that provides a physical barrier against various noxious agents. May inhibit the growth of calcium oxalate crystals in urine.

Storage

Shipped at conditions	Conditional Ambient
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

Species reactivity
Mouse, Rat: We have preliminary internal testing data to indicate this antibody may not react with these species. Please contact us for more information.

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	The Estrogen Inducible Protein pS2 also known as Trefoil Factor 1 (TFF1) is a small protein with a mass of about 6.6 kDa. It is mainly expressed in the mucosa of the stomach and other tissues responsive to estrogen. pS2 functions mechanically as part of the trefoil factor family known for its role in mucosal protection and repair. pS2 has a distinctive three-loop structure which is key to its interaction with other molecules and substrates in the cellular environment.

Biological function summary	This trefoil factor plays a significant role in the process of epithelial regeneration and maintaining gastrointestinal tract integrity. It is not known to be part of a complex but works through interaction with various growth factors and cytokines. Its expression is regulated by estrogen making pS2 significant in estrogen-responsive tissues. These interactions contribute to maintaining the stability of epithelial lining aiding in cellular migration and wound healing.
Pathways	PS2 influences cellular signaling involved in the gastric mucosal defense mainly interacting with the Epidermal Growth Factor (EGF) pathway. It modulates the pathway's effects on cell proliferation and migration. Its role is linked to the mitigation of tissue damage indicating a connection with other proteins like the EGF receptor contributing to the repair and defense mechanisms of epithelial tissues.
Associated diseases and disorders	PS2 has gained attention in breast cancer research. Its expression correlates with hormone receptor-positive breast cancer making it a potential biomarker for the disease. Additionally aberrant expression levels of pS2 might relate to gastric cancer where it plays a role in tumor progression and response to therapy. pS2 is closely connected to estrogen receptor proteins which guide its involvement in these cancers influencing prognosis and treatment strategies.

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

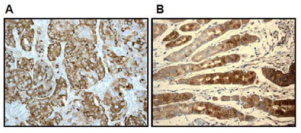
We do not recommend this combination. It is not covered by our product promise.

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.

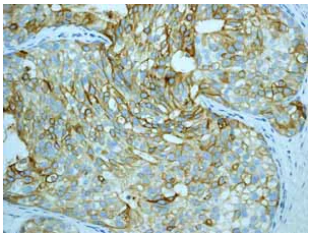
Full details and terms and conditions can be found here:
Terms & Conditions.

10 product images



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Estrogen Inducible Protein pS2 antibody [EPR3972] (ab92377)

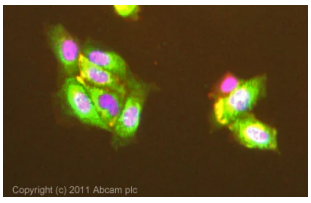
ab92377 staining Estrogen Inducible Protein pS2 in Formalin-fixed, Paraffin-embedded Human breast carcinoma tissue (A) and Human stomach tissue (B) at 1/100 dilution. Detection: DAB staining.
Heat mediated antigen retrieval was performed with citrate buffer pH 6 before commencing with IHC staining protocol.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Estrogen Inducible Protein pS2 antibody [EPR3972] (ab92377)

Estrogen Inducible Protein pS2 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-Estrogen Inducible Protein pS2 antibody

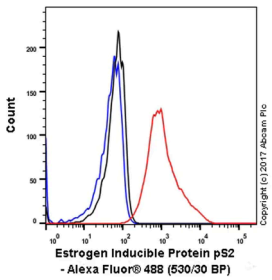
ab92377 showing positive staining in Ductal infiltrating breast carcinoma tissue.
Heat mediated antigen retrieval was performed with citrate buffer pH 6 before commencing with IHC staining protocol.



Immunocytochemistry/ Immunofluorescence - Anti-Estrogen Inducible Protein pS2 antibody [EPR3972] (ab92377)

Estrogen Inducible Protein pS2 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-Estrogen Inducible Protein pS2 antibody

ICC/IF image of ab92377 stained MCF7 cells. The cells were 4% formaldehyde (10 min) and then incubated in 1%BSA / 10% normal goat serum / 0.3M glycine in 0.1% PBS-Tween for 1h to permeabilise the cells and block non-specific protein-protein interactions. The cells were then incubated with the antibody (ab92377, 1/100 dilution) overnight at +4°C. The secondary antibody (green) was ab96899 Dylight 488 goat anti-rabbit IgG (H+L) used at a 1/250 dilution for 1h. Alexa Fluor® 594 WGA was used to label plasma membranes (red) at a 1/200 dilution for 1h. DAPI was used to stain the cell nuclei (blue) at a concentration of 1.43µM.

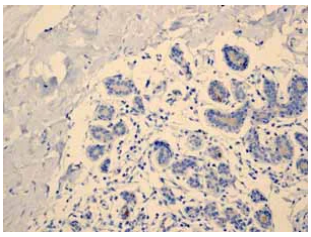


Flow Cytometry (Intracellular) - Anti-Estrogen Inducible Protein pS2 antibody [EPR3972] (ab92377)

Estrogen Inducible Protein pS2 Flow Cytometry (Intracellular) staining using rabbit Anti-Estrogen Inducible Protein pS2 antibody

Intracellular Flow Cytometry analysis of MCF-7 (human breast carcinoma) cells labeling Estrogen Inducible Protein pS2 with unpurified ab92377 at 1/20 dilution (10ug/ml) (red). Cells were fixed with 4% paraformaldehyde and permeabilised with 90% methanol. A Goat anti rabbit IgG (Alexa Fluorr® 488) (1/2000 dilution) was used as the secondary antibody. Rabbit monoclonal IgG (Black)

was used as the isotype control, cells without incubation with primary antibody and secondary antibody (Blue) were used as the unlabeled control.

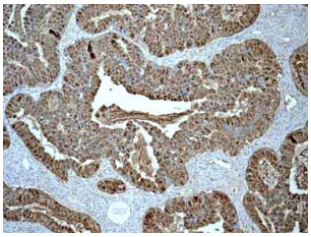


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Estrogen Inducible Protein pS2 antibody [EPR3972] (ab92377)

Estrogen Inducible Protein pS2 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-Estrogen Inducible Protein pS2 antibody

ab92377 showing negative staining in Normal breast tissue.

Heat mediated antigen retrieval was performed with citrate buffer pH 6 before commencing with IHC staining protocol.

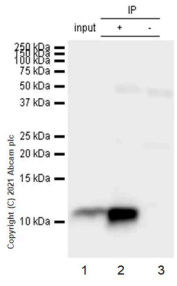


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Estrogen Inducible Protein pS2 antibody [EPR3972] (ab92377)

Estrogen Inducible Protein pS2 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-Estrogen Inducible Protein pS2 antibody

ab92377 showing positive staining in Ovarian carcinoma tissue.

Heat mediated antigen retrieval was performed with citrate buffer pH 6 before commencing with IHC staining protocol.



Immunoprecipitation - Anti-Estrogen Inducible Protein pS2 antibody [EPR3972] (ab92377)

Estrogen Inducible Protein pS2 was immunoprecipitated from 0.35 mg MCF7 (Human breast adenocarcinoma epithelial cell) whole cell lysate 10 µg with ab92377 at 1/50 dilution (2µg). VeriBlot for IP Detection Reagent (HRP) (ab131366) was used at 1/5000 dilution.
Lane 1: MCF7 (Human breast adenocarcinoma epithelial cell) whole cell lysate 10 µg

Lane 2: ab92377 IP in MCF7 whole cell lysate

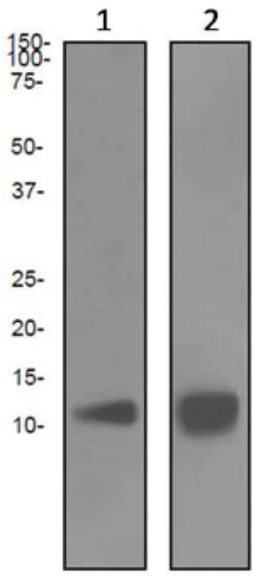
Lane 3: Rabbit monoclonal IgG (ab172730) instead of ab92377 in MCF7 whole cell lysate

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

All lanes:
Immunoprecipitation - Anti-Estrogen Inducible Protein pS2 antibody [EPR3972] (ab92377)

Predicted band size: 9 kDa

Observed band size: 9 kDa



Western blot - Anti-Estrogen Inducible Protein pS2 antibody [EPR3972] (ab92377)

All lanes:
Western blot - Anti-Estrogen Inducible Protein pS2 antibody [EPR3972] (ab92377) at 1/1000 dilution

Lane 1:
Human stomach lysate at 10 µg

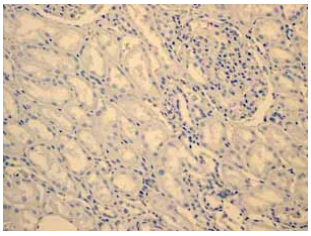
Lane 2:
MCF-7 cell lysate at 10 µg

Secondary

All lanes:
HRP labelled goat anti-rabbit at 1/2000 dilution

Predicted band size: 18 kDa, 9 kDa

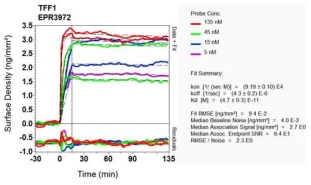
Observed band size: 22 kDa



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Estrogen Inducible Protein pS2 antibody [EPR3972] (ab92377)

ab92377 showing negative staining in Normal kidney tissue.

Heat mediated antigen retrieval was performed with citrate buffer pH 6 before commencing with IHC staining protocol.



OI-RD Scanning - Anti-Estrogen Inducible Protein pS2 antibody [EPR3972] (ab92377)

We have systematically measured KD (the equilibrium dissociation constant between the antibody and its antigen), of more than 840 recombinant antibodies to assess not only their individual KD values but also to see the average affinity of antibody. Based on the comparison with published literature values for mouse monoclonal antibodies, Recombinant antibodies appear to be on average 1-2 order of magnitude higher affinity.

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