abcam

ab255610

Anti-Stanniocalcin 2/STC-2 antibody [EPR22866-10]

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	EPR22866-10
Purification technique	Affinity purification Protein A
Concentration	0.47 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IP

Tested

Species	Human
Dilution info	1/30
Notes	-

WB

Tested

Species	Human
Dilution info	1/1000
Notes	-

ICC/IF

Tested

Species	Human
Dilution info	1/50
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	1/50
Notes	-

IHC-P

Tested

Species	Human
Dilution info	1/200
Notes	-

Target data

See full target information Stanniocalcin-2

Function	Has an anti-hypocalcemic action on calcium and phosphate homeostasis.

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	Stanniocalcin 2 (STC-2) is a glycoprotein hormone known for regulating calcium and phosphate homeostasis. It has other names like STC-1-related protein and STC2. The protein has a mass of approximately 33 kDa. STC-2 expresses in various tissues with high levels in the liver kidney and thyroid gland. Its expression suggests an important role in maintaining mineral balance in these tissues.
Biological function summary	STC-2 influences metabolic and inflammatory processes by modulating cellular responses to calcium and phosphate. It operates partly by binding to receptors on cell surfaces impacting cell proliferation and survival. While not part of a known complex STC-2 interacts with signaling molecules involved in bone metabolism and endocrine function serving as a modulator of mineralized tissue homeostasis.
Pathways	In mineral homeostasis STC-2 interacts within pathways involving calcium and phosphate regulation. Its interactions include overlap with the PTH (parathyroid

	hormone) and vitamin D pathways each critical for calcium and bone metabolism. STC-2 shows connections with proteins like FGF23 (fibroblast growth factor 23) that also participate in these regulatory networks impacting how cells manage mineral concentrations.
Associated diseases and disorders	Research indicates STC-2's involvement in conditions such as chronic kidney disease and some cancers. Its expression levels correlate with abnormal mineral metabolism in kidney disease where it may interact with proteins like Klotho a known regulator of phosphate transport. In oncology overexpression of STC-2 associates with cancer progression potentially linking to altered signaling pathways in tumor cells.

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

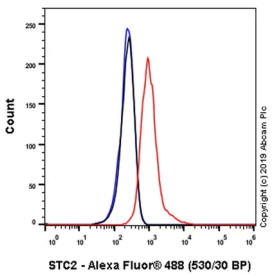
We do not recommend this combination. It is not covered by our product promise.

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.

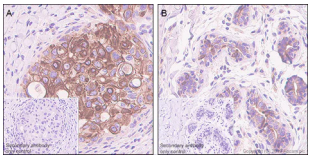
9 product images



Flow Cytometry (Intracellular) - Anti-Stanniocalcin 2/STC-2 antibody [EPR22866-10] (ab255610)

Stanniocalcin 2/STC-2 Flow Cytometry (Intracellular) staining using rabbit Anti-Stanniocalcin 2/STC-2 antibody

Intracellular flow cytometric analysis of 4% paraformaldehyde fixed, 90% methanol permeabilized HepG2 (human hepatocellular carcinoma epithelial cell) cells labelling STC2 with ab255610 at 1/50 dilution (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). A Goat anti rabbit IgG (Alexa Fluor® 488, ab150077) at 1/2000 dilution was used as the secondary antibody.

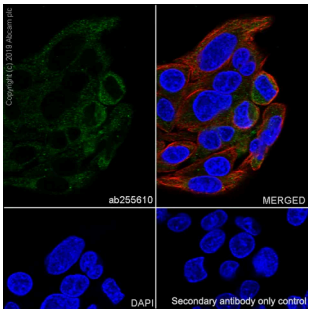


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Stanniocalcin 2/STC-2 antibody [EPR22866-10] (ab255610)

Stanniocalcin 2/STC-2 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-Stanniocalcin 2/STC-2 antibody

Immunohistochemical analysis of paraffin-embedded Human breast cancer (A) and its adjacent noncancerous breast tissue (B) tissue labeling STC2 with ab255610 at 1/ 200 dilution (2.29ug/ml) followed by a ready to use Rabbit specific IHC polymer detection kit HRP/DAB (ab209101). Strong cytoplasmic staining in human breast cancer tissue (A) while weak staining in its adjacent noncancerous breast tissue (B) (PMID: 18492817) is observed. The section was incubated with ab255610 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 Rabbit specific IHC polymer detection kit HRP/DAB (ab209101).

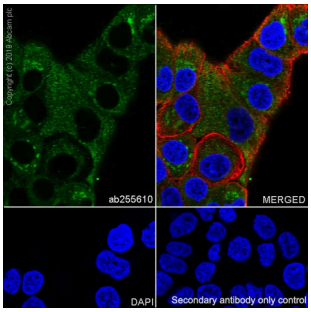
Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0, epitope retrieval solution 2) for 20 mins.



Immunocytochemistry/ Immunofluorescence - Anti-Stanniocalcin 2/STC-2 antibody [EPR22866-10] (ab255610)

Stanniocalcin 2/STC-2 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-Stanniocalcin 2/STC-2 antibody

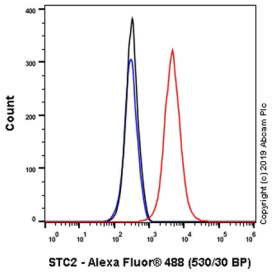
Immunofluorescent analysis of 4% Paraformaldehyde-fixed, 0.1% TritonX-100 permeabilized HepG2 (human hepatocellular carcinoma epithelial cell) cells labelling STC2 with ab255610 at 1/50 (9 ug/ml) dilution, followed by ab150077 AlexaFluor® 488 Goat anti-Rabbit secondary antibody at 1/1000 (2 ug/ml) dilution (Green). Confocal image showing cytoplasmic staining in HepG2 cell line. ab195889 Anti-alpha Tubulin antibody [DM1A] - Microtubule Marker (Alexa Fluor® 594) was used to counterstain tubulin at 1/200 dilution (Red). The Nuclear counterstain was DAPI (Blue).
Secondary antibody only control: Secondary antibody is ab150077 AlexaFluor® 488 Goat anti-Rabbit secondary at 1/1000 (2 ug/ml) dilution.



Immunocytochemistry/ Immunofluorescence - Anti-Stanniocalcin 2/STC-2 antibody [EPR22866-10] (ab255610)

Stanniocalcin 2/STC-2 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-Stanniocalcin 2/STC-2 antibody

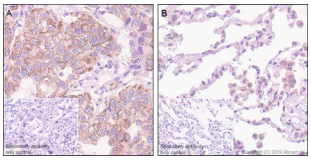
Immunofluorescent analysis of 4% Paraformaldehyde-fixed, 0.1% TritonX-100 permeabilized T-47D (human ductal breast epithelial tumor epithelial cell) cells labelling STC2 with ab255610 at 1/50 (9 ug/ml) dilution, followed by ab150077 AlexaFluor® 488 Goat anti-Rabbit secondary antibody at 1/1000 (2 ug/ml) dilution (Green). Confocal image showing cytoplasmic staining in T-47D cell line. ab195889 Anti-alpha Tubulin antibody [DM1A] - Microtubule Marker (Alexa Fluor® 594) was used to counterstain tubulin at 1/200 dilution (Red). The Nuclear counterstain was DAPI (Blue).
Secondary antibody only control: Secondary antibody is ab255610 anti-STC2 ab150077 AlexaFluor® 488 Goat anti-Rabbit secondary at 1/1000 (2 ug/ml) dilution.



Flow Cytometry (Intracellular) - Anti-Stanniocalcin 2/STC-2 antibody [EPR22866-10] (ab255610)

Stanniocalcin 2/STC-2 Flow Cytometry (Intracellular) staining using rabbit Anti-Stanniocalcin 2/STC-2 antibody

Intracellular flow cytometric analysis of 4% paraformaldehyde fixed, 90% methanol permeabilized T-47D (human ductal breast epithelial tumor epithelial cell) cells labelling STC2 with ab255610 at 1/500 dilution (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). A Goat anti rabbit IgG (Alexa Fluor® 488, ab150077) at 1/2000 dilution was used as the secondary antibody.

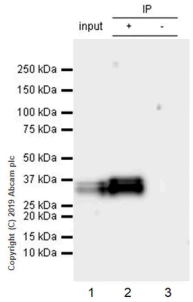


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Stanniocalcin 2/STC-2 antibody [EPR22866-10] (ab255610)

Stanniocalcin 2/STC-2 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-Stanniocalcin 2/STC-2 antibody

Immunohistochemical analysis of paraffin-embedded Human lung cancer (A) and its adjacent noncancerous lung tissue (B) tissue labeling STC2 with ab255610 at 1/ 200 dilution (2.29ug/ml) followed by a ready to use Rabbit specific IHC polymer detection kit HRP/DAB (ab209101). Strong cytoplasmic staining in human lung cancer tissue (A) while weak staining in its adjacent noncancerous lung tissue (B) (PMID: 25463045) is observed. The section was incubated with ab255610 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 Rabbit specific IHC polymer detection kit HRP/DAB (ab209101).

Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0, epitope retrieval solution 2) for 20 mins.



Immunoprecipitation - Anti-Stanniocalcin 2/STC-2 antibody [EPR22866-10] (ab255610)

STC2 was immunoprecipitated from 0.35 mg T-47D (human ductal breast epithelial tumor epithelial cell) whole cell lysate with ab255610 at 1/30 dilution (2ug in 0.35mg lysates). Western blot was performed on the immunoprecipitate using ab255610 at 1/1000 dilution. VeriBlot for IP Detection Reagent (HRP) (ab131366) was used at 1/5000 dilution.
Lane 1: T-47D (human ductal breast epithelial tumor epithelial cell) whole cell lysate 10ug

Lane 2: ab255610 IP in T-47D whole cell lysate

Lane 3: Rabbit monoclonal IgG (ab172730) instead of ab255610 in T-47D whole cell lysate

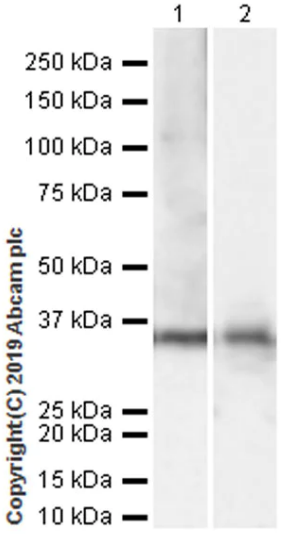
Blocking and dilution buffer and concentration: 5% NFDM/TBST.

Exposure time: 30 seconds.

All lanes:
Immunoprecipitation - Anti-Stanniocalcin 2/STC-2 antibody [EPR22866-10] (ab255610)

Predicted band size: 33 kDa

Observed band size: 33-35 kDa



Western blot - Anti-Stanniocalcin 2/STC-2 antibody [EPR22866-10] (ab255610)

Blocking and diluting buffer and concentration: 5% NFDM/TBST The expression profile observed is consistent with what has been described in the literature (PMID:15367391, 25463045, 26361149).
Exposure time: Lane 1: 3 minutes; Lane 2: 48 seconds.

All lanes:
Western blot - Anti-Stanniocalcin 2/STC-2 antibody [EPR22866-10] (ab255610) at 1/1000 dilution

Lane 1:
HCT116 (human colorectal carcinoma epithelial cell), whole cell lysate at 20 µg

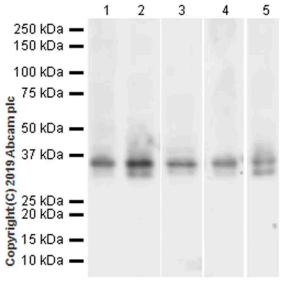
Lane 2:
Human breast cancer tissue lysate at 20 µg

Secondary

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

Predicted band size: 33 kDa

Observed band size: 35 kDa



Western blot - Anti-Stanniocalcin 2/STC-2 antibody [EPR22866-10] (ab255610)

Stanniocalcin 2/STC-2 Western blot staining using rabbit Anti-Stanniocalcin 2/STC-2 antibody

Blocking and diluting buffer and concentration: 5% NFDM/TBST The expression profile observed is consistent with what has been described in the literature, the dual bands caused by different posttranslational modifications (PMID: 15367391, 25463045, 26361149).

Exposure time: Lane 1-2: 48 seconds; Lane 3: 26 seconds; Lane 4: 114 seconds; Lane 5: 15 seconds.
All lanes:
Western blot - Anti-Stanniocalcin 2/STC-2 antibody [EPR22866-10] (ab255610) at 1/1000 dilution

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

Lane 2:
HepG2 (human hepatocellular carcinoma epithelial cell), whole cell lysate at 20 µg

Lane 3:
MCF7 (human breast adenocarcinoma epithelial cell), whole cell lysate at 20 µg

Lane 4:
HT-29 (human colorectal adenocarcinoma epithelial cell), whole cell lysate at 20 µg

Lane 5:
293T (human embryonic kidney epithelial cell), whole cell lysate at 20 µg

Secondary

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

Predicted band size: 33 kDa

Observed band size: 33-35 kDa

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