Product Datasheet

SGSM2 Antibody - BSA Free
NBP1-93637

Unit Size: 0.1 ml

Store at 4C short term. Aliquot and store at -20C long term. Avoid freeze-thaw cycles.

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Publications: 1

Protocols, Publications, Related Products, Reviews, Research Tools and Images at:
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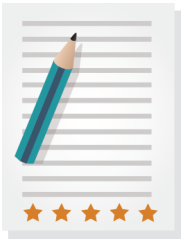
Updated 12/2/2025 v.20.1



NBP1-93637

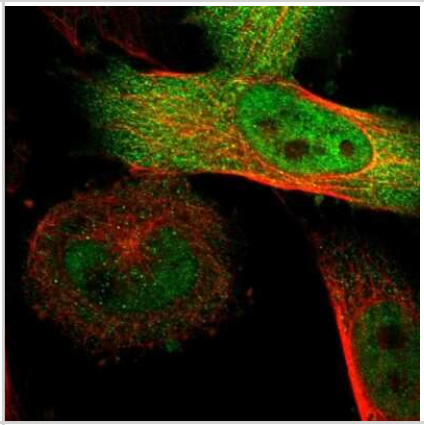
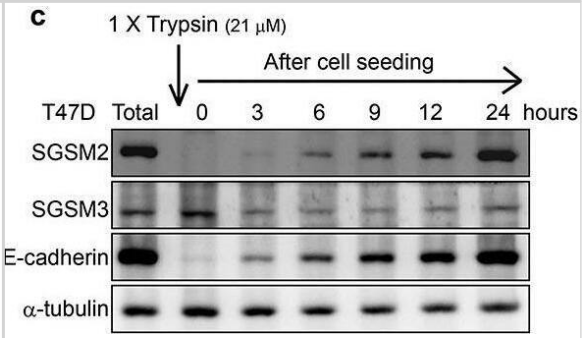
SGSM2 Antibody - BSA Free

Product Information	
Unit Size	0.1 ml
Concentration	Concentrations vary lot to lot. See vial label for concentration. If unlisted please contact technical services.
Storage	Store at 4C short term. Aliquot and store at -20C long term. Avoid freeze-thaw cycles.
Clonality	Polyclonal
Preservative	0.02% Sodium Azide
Isotype	IgG
Purity	Affinity purified
Buffer	PBS (pH 7.2) and 40% Glycerol

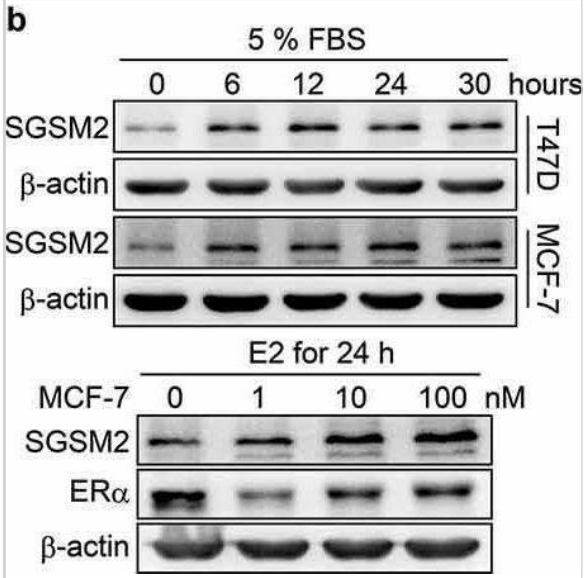
Product Description	
Description	Novus Biologicals Rabbit SGSM2 Antibody - BSA Free (NBP1-93637) is a polyclonal antibody validated for use in IHC, WB and ICC/IF. Anti-SGSM2 Antibody: Cited in 1 publication. All Novus Biologicals antibodies are covered by our 100% guarantee.
Host	Rabbit
Gene ID	9905
Gene Symbol	SGSM2
Species	Human
Reactivity Notes	Immunogen displays the following percentage of sequence identity for non-tested species: Mouse (80%), Rat (80%)
Immunogen	This antibody was developed against Recombinant Protein corresponding to amino acids: SGIQSSLDEGQSVGFEEEDGGGEEGSSGPGPAAHTLREPQDPSQEKPQAGEL EAGEELAAVCAAAYTIELLDTVALNLHRIDKDVQRCDRNYWY

Product Application Details	
Applications	Western Blot, Immunohistochemistry-Paraffin, Immunocytochemistry/ Immunofluorescence, Immunohistochemistry
Recommended Dilutions	Western Blot 0.04-0.4 ug/ml, Immunohistochemistry 1:200 - 1:500, Immunocytochemistry/ Immunofluorescence 0.25-2 ug/ml, Immunohistochemistry-Paraffin 1:200 - 1:500
Application Notes	For IHC-Paraffin, HIER pH 6 retrieval is recommended. Immunocytochemistry/Immunofluorescence Fixation Permeabilization: Use PFA/Triton X-100. Use in Western blot reported in reported in scientific literature (PMID: 30744493).

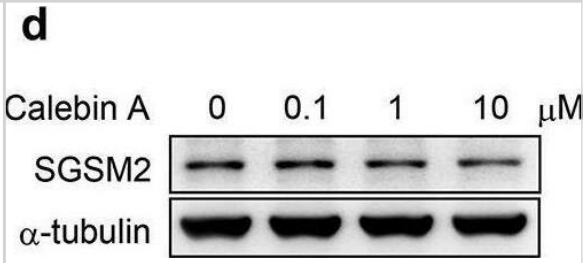
Images

Immunocytochemistry/Immunofluorescence: SGSM2 Antibody [NBP1-93637] - Staining of human cell line U-251 MG shows localization to nucleoplasm & cytosol.	
Immunohistochemistry-Paraffin: SGSM2 Antibody [NBP1-93637] - Staining of human cerebral cortex shows cytoplasmic positivity in neuronal and glia cells.	
Trypsin-EDTA-digested SGSM2 protein on the cell membrane in the T47D breast cancer cell line. (a) T47D cells were treated with different concentrations (0, 0.21, 2.1, 21, 210, or 2100 nM) of trypsin-EDTA for 3 minutes; bottom graphs show different cell morphologies after trypsin-EDTA treatment (5x, scale bar: 250 µm). (b) SGSM2, E-cadherin, and SGSM3 protein expression changes were observed in 11 adherent breast cell lines and a human melanoma cell line (MDA-MB-435s) after treatment with or without trypsin-EDTA (21 µM). (c) T47D cells were treated with trypsin-EDTA (1X; 21 µM) for subculture, and then, SGSM2, E-cadherin, and SGSM3 protein levels were observed at different time points (0, 3, 6, 9, 12, and 24 hours) after cell seeding. (d) Cytosol and membrane extracts were examined to confirm SGSM2 protein localization after 21 nM trypsin-EDTA treatment, and (e) higher (21 µM) trypsin-EDTA concentrations were further examined. 'Total', representing total protein, which was the positive control, was extracted after cell seeding for 48 hours. GAPDH and EGFR were used as the positive cytosol and membrane controls, respectively. α-Tubulin served as the internal control for western blotting. Image collected and cropped by CiteAb from the following open publication (https://pubmed.ncbi.nlm.nih.gov/30744493), licensed under a CC-BY license. Not internally tested by Novus Biologicals.	

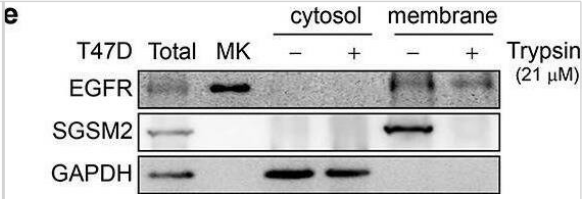
SGSM2 was located with p-FAK (Y397) at the leading edge of oestrogen-induced migrating cells. (a) SGSM2 and p-FAK(Y397) colocalized at focal adhesions in fibronectin-stimulated MCF-7 cells. The upper images were acquired at the 2-hour mark after cell seeding on fibronectin-coated slides; the bottom image was captured at the 6-hour mark after cell seeding. SGSM2 is shown in red (rhodamine), and p-FAK (Y397) is shown in green (FITC). White arrows indicate colocalization of SGSM2 and p-FAK (Y397) at focal adhesion sites. Scale bar, 10 μm. (b) SGSM2 protein expression was induced in T47D and MCF-7 cells at different times (0, 6, 12, 24, and 30 hours) by 5% FBS (serum) exposure (upper panel). SGSM2 was dose-dependently (0, 1, 10, 100 nM) increased in MCF-7 cells by treatment with oestradiol (E2) (bottom panel). β-Actin was the internal control. (c) Cell bleb formation occurred at the 30-minute mark after E2 (10 nM) exposure. SGSM2 is shown in red (rhodamine), and β-tubulin is shown in green (FITC). A strong interaction was indicated by FRET activity. White arrows indicate colocalization of SGSM2 and β-tubulin. Scale bar, 5 μm. (d) Focal adhesion formation occurred at the 2-hour mark after E2 (10 nM) exposure; white arrows indicate colocalization of SGSM2 and p-FAK (Y397) at focal adhesion sites. Scale bar, 25 μm (e) Cell ruffling formation occurred at the 6-hour mark after E2 (10 nM) exposure; white arrows indicate colocalization of SGSM2 and p-FAK (Y397) at ruffling sites. Scale bar, 10 μm. (d) (e) SGSM2 is shown in red (rhodamine), and p-FAK (Y397) is shown in green (FITC). Image collected and cropped by CiteAb from the following open publication (https://pubmed.ncbi.nlm.nih.gov/30744493), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



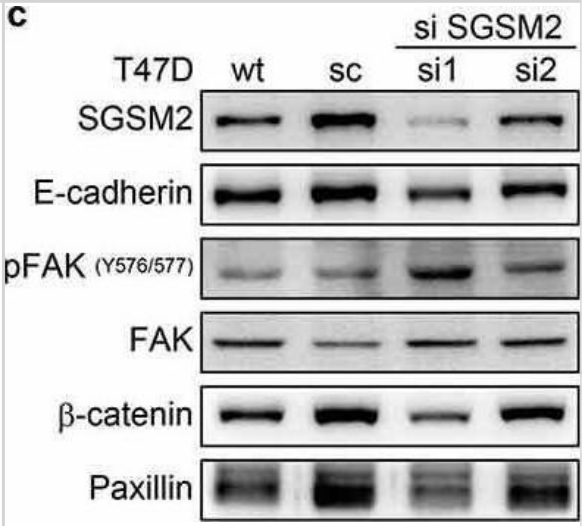
Natural compounds inhibited SGSM2 protein expression and decreased NNK-induced cell-matrix adhesion. (a) Determination of SGSM2 mRNA levels after treatment with 10 μM of several natural compounds (curcumin, garcinol, and calebin A) for 24 hours (b) Determination of the SGSM2 protein levels after treatment with 10 μM of various natural compounds (garcinol, curcumin, nobiletin, calebin A, and 3' PS) for 24 hours; DMSO was the solvent control. The mean density of SGSM2 protein level in each cell line was normalized to α-tubulin, and the values were compared with DMSO. (c) Differences in T47D cell adhesion abilities were investigated by treatment with two (calebin A and 3' PS; 10 μM) natural compounds combined with or without NNK (100 nM). (d) SGSM2 proteins were dose-dependently decreased by treatment with calebin A (0, 0.1, 1, and 10 μM) for 24 hours. (e) NNK (100 nM)-induced cell adhesion abilities were significantly inhibited by cotreatment with 1 and 10 μM calebin A. For adhesion experiments, 1 μg/ml fibronectin was coated onto the dish. α-Tubulin was the internal control. P-values were determined with Student's t-test; *P < 0.05, and **P < 0.01. All experiments were repeated more than 3 times (n > 3). Image collected and cropped by CiteAb from the following open publication (https://pubmed.ncbi.nlm.nih.gov/30744493), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



Trypsin-EDTA-digested SGSM2 protein on the cell membrane in the T47D breast cancer cell line. (a) T47D cells were treated with different concentrations (0, 0.21, 2.1, 21, 210, or 2100 nM) of trypsin-EDTA for 3 minutes; bottom graphs show different cell morphologies after trypsin-EDTA treatment (5x, scale bar: 250 μm). (b) SGSM2, E-cadherin, and SGSM3 protein expression changes were observed in 11 adherent breast cell lines and a human melanoma cell line (MDA-MB-435s) after treatment with or without trypsin-EDTA (21 μM). (c) T47D cells were treated with trypsin-EDTA (1X; 21 μM) for subculture, and then, SGSM2, E-cadherin, and SGSM3 protein levels were observed at different time points (0, 3, 6, 9, 12, and 24 hours) after cell seeding. (d) Cytosol and membrane extracts were examined to confirm SGSM2 protein localization after 21 nM trypsin-EDTA treatment, and (e) higher (21 μM) trypsin-EDTA concentrations were further examined. 'Total', representing total protein, which was the positive control, was extracted after cell seeding for 48 hours. GAPDH and EGFR were used as the positive cytosol and membrane controls, respectively. α-Tubulin served as the internal control for western blotting. Image collected and cropped by CiteAb from the following open publication (https://pubmed.ncbi.nlm.nih.gov/30744493), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



SGSM2 silencing affected T47D cell adhesion and cell migration. (a) The efficiency of SGSM2 knockdown was determined by western blotting (upper panel); sc (scramble), si1, si2, and si3 SGSM2 stable cell lines were collected by G418 selection. The lower panel shows the adhesion abilities of different stable cell lines plated on three types (fibronectin, type I collagen, and type IV collagen; 1 μg/ml) of ECM proteins. Wt indicates wild-type T47D cells. (b) Cell migration abilities of four types (wt, sc, si1, si2) of T47D cells were examined with wound-healing assays; left panels show the cell migration states at 0, 24, and 48 hours. Hoechst was used to stain the nuclei. The average number of migrated cells is presented in the right panel. (c) The protein levels of E-cadherin, β-catenin, Paxillin, FAK, SRC, Snail, and Twist were detected by western blotting in wt, sc, si1, and si2 T47D cells. β-Actin-1, 2, 3, 4 served as the internal controls. P-values were determined with Student's t-test; **P < 0.01. All experiments were repeated more than 3 times (n > 3). Image collected and cropped by CiteAb from the following open publication (https://pubmed.ncbi.nlm.nih.gov/30744493), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



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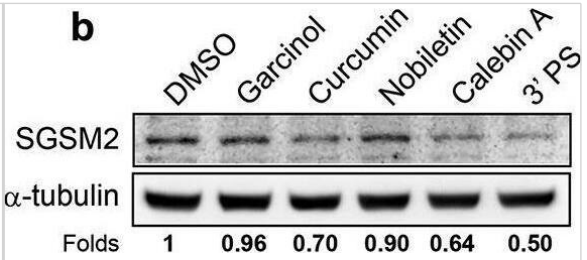

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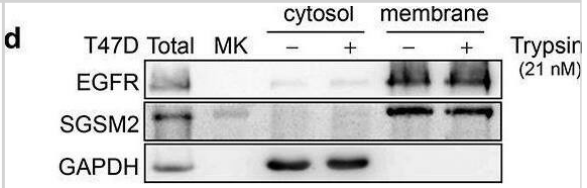

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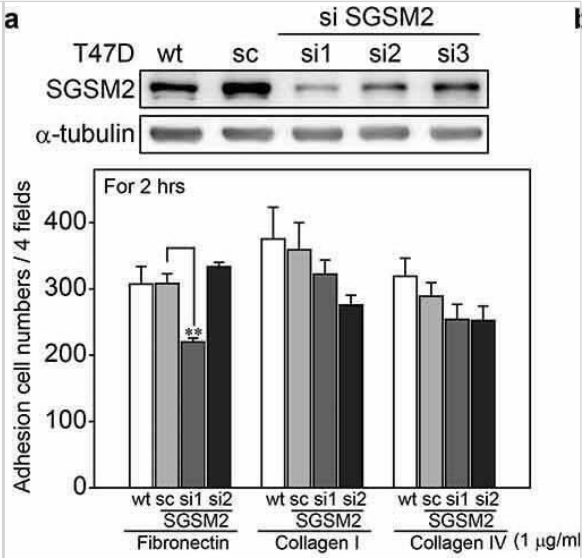

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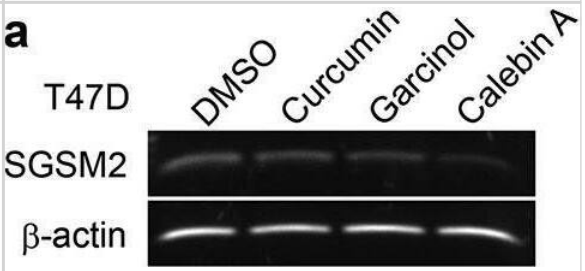
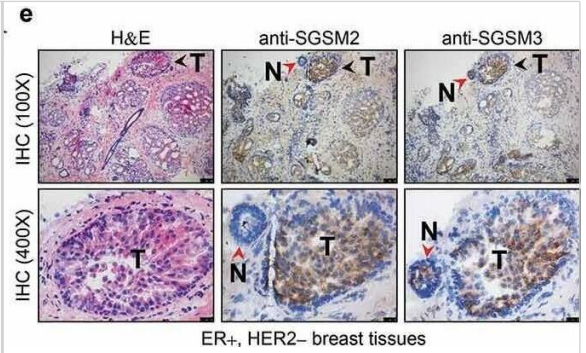


SGSM2 expression was detected in human breast tissues and human breast cancer cell lines. (a) SGSM2 mRNA expressions in normal and malignant tissues was determined in 53 BC patients via RT-PCR, and the gel band intensities were quantified with PhotoCaptMw software (version 11.0.). We used normalized SGSM2 expression to classify patients into three groups: T > N, N = T, and N > T (N = normal tissue, and T = tumour tissue); and further, (b) quantitative real-time PCR was used to evaluate SGSM2 mRNA expression profiles in paired human breast tumour (red lines) and normal (green lines) tissues (n = 200). (c) The means of SGSM2 mRNA copy number (per µg of mRNA) were calculated from real-time PCR data. The data were analysed with a paired sample t-test with two-sided P-values. (d) In vitro SGSM2 and SGSM3 protein expression was detected in twelve breast cancer cell lines and one breast epithelial cell line; the mean density of SGSM2 and SGSM3 protein level in each cell line was normalized to β-actin, and the values were compared to the MCF-10A cell line. The hormone receptor status is displayed at the bottom. (e) The distribution of SGSM2 and SGSM3 proteins were determined in ER+/ HER2 – breast cancer tissue sections; Haematoxylin (violet, for nuclei) and eosin (pink) (H&E) staining is shown in the left panels; anti-SGSM2 and anti-SGSM3 antibody bound to antigen is shown in the middle and right panels (N = normal region, T = tumour region). Top panels: 100x, scale bar: 100 µm; bottom panels: 400x, scale bar: 25 µm. Image collected and cropped by CiteAb from the following open publication (https://pubmed.ncbi.nlm.nih.gov/30744493), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



Publications

Lin JH, Lee WJ, Wu HC et al. Small G protein signalling modulator 2 (SGSM2) is involved in oestrogen receptor-positive breast cancer metastasis through enhancement of migratory cell adhesion via interaction with E-cadherin Cell Adh Migr 2019-02-11 [PMID: 30744493] (WB, IF/IHC, Human)

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Products Related to NBP1-93637

NBP1-93637PEP	SGSM2 Recombinant Protein Antigen
NBP2-33376H	Blue Marker Antibody (6F4-F6) [HRP]
HAF008	Goat anti-Rabbit IgG Secondary Antibody [HRP]
NB7160	Goat anti-Rabbit IgG (H+L) Secondary Antibody [HRP]
NBP2-24891	Rabbit IgG Isotype Control

Limitations

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