

Product Datasheet

Calcium-sensing R/CaSR Antibody (5C10, ADD) - BSA Free NB120-19347

Unit Size: 0.1 mg

Store at -20C. Avoid freeze-thaw cycles.

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NB120-19347

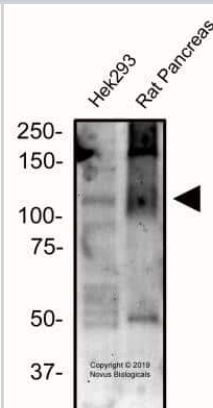
Calcium-sensing R/CaSR Antibody (5C10, ADD) - BSA Free

Product Information	
Unit Size	0.1 mg
Concentration	1 mg/ml
Storage	Store at -20C. Avoid freeze-thaw cycles.
Clonality	Monoclonal
Clone	5C10, ADD
Preservative	0.02% Sodium Azide
Isotype	IgG2a
Purity	Protein A or G purified
Buffer	PBS
Product Description	
Description	Novus Biologicals Mouse Calcium-sensing R/CaSR Antibody (5C10, ADD) - BSA Free (NB120-19347) is a monoclonal antibody validated for use in IHC, WB, ELISA, Flow and ICC/IF. Anti-Calcium-sensing R/CaSR Antibody: Cited in 21 publications. All Novus Biologicals antibodies are covered by our 100% guarantee.
Host	Mouse
Gene ID	846
Gene Symbol	CASR
Species	Human, Mouse, Rat, Porcine, Bovine
Reactivity Notes	Mouse reactivity reported in scientific literature (PMID: 21969374). Please note that this antibody is reactive to Mouse and derived from the same host, Mouse. Additional Mouse on Mouse blocking steps may be required for IHC and ICC experiments. Please contact Technical Support for more information. Porcine reactivity reported in scientific literature (PMID: 27836810).
Immunogen	Partial synthetic peptide corresponding to residues 214 - 235 of human calcium sensing receptor R / CaSR [UniProt P41180]
Product Application Details	
Applications	Western Blot, Immunohistochemistry-Paraffin, ELISA, Immunocytochemistry/Immunofluorescence, Immunohistochemistry, Immunohistochemistry-Frozen
Recommended Dilutions	Western Blot 2 ug/ml, ELISA 1:100 - 1:2000, Immunohistochemistry 1:10 - 1:500, Immunocytochemistry/ Immunofluorescence 1:10-1:500, Immunohistochemistry-Paraffin 1:10 - 1:500. Use reported in scientific literature, Immunohistochemistry-Frozen 1:10 - 1:500
Application Notes	In Western blot this antibody detects bands at approximately 130 and 150 kDa. We have conflicting data on the use of this antibody in Flow.

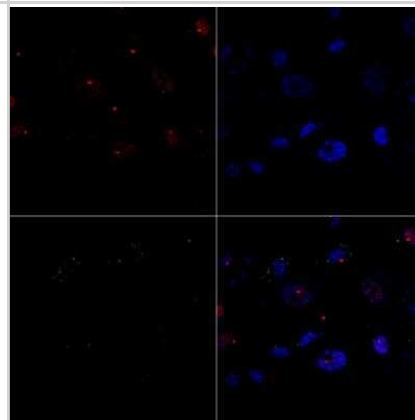


Images

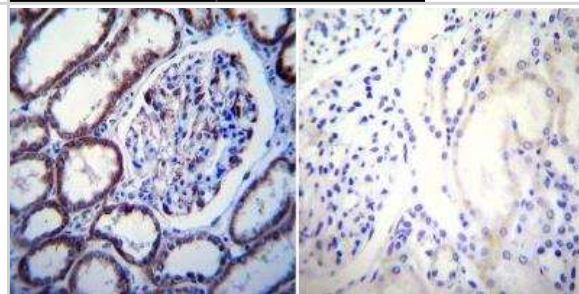
Western Blot: Calcium-sensing R/CaSR Antibody (5C10, ADD) [NB120-19347] - Total protein from human Hek293 and rat Pancreas was separated on a 7.5% gel by SDS-PAGE, transferred to PVDF membrane and blocked in 5% non-fat milk in TBST. The membrane was probed with 2.0 ug/ml anti-CaSR in block buffer and detected with an anti-mouse HRP secondary antibody using West Pico PLUS chemiluminescence detection reagent.



Immunocytochemistry/Immunofluorescence: Calcium-sensing R/CaSR Antibody (5C10, ADD) [NB120-19347] - Analysis of primary astrocytes using Calcium-sensing R/CaSR antibody. Primary astrocytes co-stained with cilia (Arl13b, red, top left), CASR (green, bottom left), DAPI (blue, top right) and merged (bottom right). Image from verified customer review.



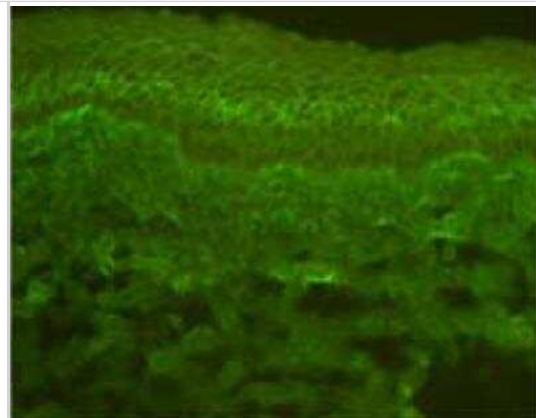
Immunohistochemistry-Paraffin: Calcium-sensing R/CaSR Antibody (5C10, ADD) [NB120-19347] - Normal biopsies of deparaffinized Human kidney tissue.



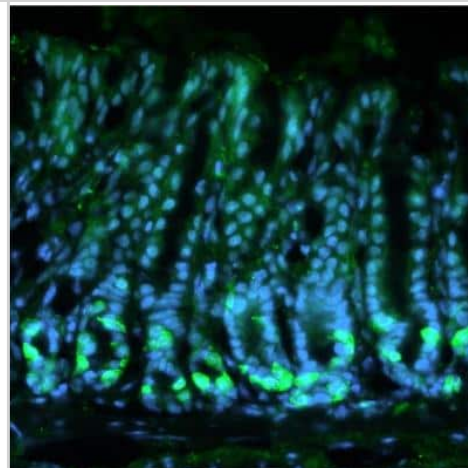
Western Blot: Calcium-sensing R/CaSR Antibody (5C10, ADD) [NB120-19347] - Analysis of calcium sensing receptor in HEK7-2 cell extract.



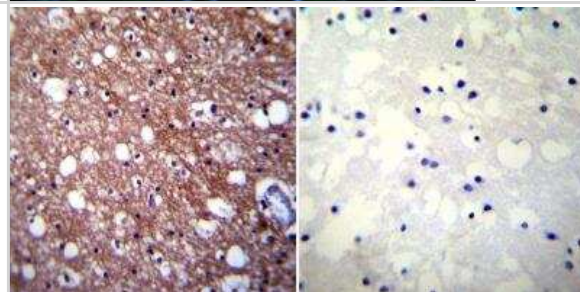
Immunocytochemistry/Immunofluorescence: Calcium-sensing R/CaSR Antibody (5C10, ADD) [NB120-19347] - Analysis of bovine corneal epithelium (CE) limbus tissue.



Immunohistochemistry: Calcium-sensing R/CaSR Antibody (5C10, ADD) [NB120-19347] - Fresh stomach tissue was fixed in 4% formalin for 1 hr & then incubated overnight at 4C in 25% sucrose before embedding in tissue freezing medium. Antigen retrieval was carried out on 8 um cryo-sections by incubating in sodium citrate buffer for 45 mins at 4C, immersing in sodium citrate buffer for 10 mins at 100C before washing 3 times for 5 mins each in 1X PBS. Blocked in blocking buffer (0.3% Triton X-100 in 1X PBS, 10% normal goat serum) for 30 mins at RT before staining with NB120-19347 (diluted 1:100 in blocking buffer) overnight at 4C followed by a fluorophore-conjugated goat anti-mouse IgG secondary antibody for 2 hrs at RT. Sections were also stained with DAPI nuclear stain (blue). NB120-19347 positive cells (green) were found at the base of the antral gl&s in the mouse stomach. Data courtesy of the Innovators Program



Immunohistochemistry-Paraffin: Calcium-sensing R/CaSR Antibody (5C10, ADD) [NB120-19347] - Normal biopsies of deparaffinized Human brain tissue.



Publications

Sherman BE, Calderon E, Price RS Characterizing the Role of Calcium Sensing Receptor in the Progression of Obesity-Mediated Aggressive Prostate Cancer Phenotype Nutrition and cancer 2023-02-14 [PMID: 36786422]

Frees S, Breuksch I, Haber T et al. Calcium-sensing receptor (CaSR) promotes development of bone metastasis in renal cell carcinoma. Oncotarget. [PMID: 29644008] (FLOW, WB, Human)

Nery F, Siranosian J, Rosales I et al. Impaired kidney structure and function in spinal muscular atrophy Neurol Genet 2019-10-01 [PMID: 31517062] (IHC-P, Human)

Bachinger D, Egli H, Goosmann MM et al. Immunolocalization of calcium sensing and transport proteins in the murine endolymphatic sac indicates calciostatic functions within the inner ear Cell Tissue Res. 2019-07-23 [PMID: 31338584] (IHC-P, Mouse)

Luchsinger LL, Strikoudis A, Danzl NM et al. Harnessing Hematopoietic Stem Cell Low Intracellular Calcium Improves Their Maintenance In Vitro Cell Stem Cell 2019-05-31 [PMID: 31178255] (FLOW, Mouse, Human)

Issa H, Henaut L, Abdallah JB et al. Activation of the calcium-sensing receptor in human valvular interstitial cells promotes calcification J. Mol. Cell. Cardiol. 2019-02-12 [PMID: 30769016] (WB, IHC-Fr, Human)

Boudot C, Henaut L, Thiem U et al. Overexpression of a functional calcium-sensing receptor dramatically increases osteolytic potential of MDA-MB-231 cells in a mouse model of bone metastasis through epiregulin-mediated osteoprotegerin downregulation Oncotarget 2017-08-22 [PMID: 28915604] (WB, Mouse)

Dai XQ, Perez PL, Soria G et al. External Ca(2+) regulates polycystin-2 (TRPP2) cation currents in LLC-PK1 renal epithelial cells. Exp. Cell Res. 2016-11-09 [PMID: 27836810] (Porcine)

Koh J, Hogue JA, Sosa JA. A Novel Ex Vivo Method for Visualizing Live-Cell Calcium Response Behavior in Intact Human Tumors. PLoS One 2016-08-18 [PMID: 27537691] (ICC/IF)

Koh J, Hogue JA, Wang Y et al. Single-cell functional analysis of parathyroid adenomas reveals distinct classes of calcium sensing behaviour in primary hyperparathyroidism. J. Cell. Mol. Med. 2015-12-05 [PMID: 26638194] (ICC/IF, Human)

Shilo V, Ben-Dov IZ, Nechama M et al. Parathyroid-specific deletion of dicer-dependent microRNAs abrogates the response of the parathyroid to acute and chronic hypocalcemia and uremia FASEB J. 2015-06-08 [PMID: 26054367] (IHC-P, Mouse)

Szalat A, Shahar M, Shpitzen S et al. Calcium-sensing receptor sequencing in 21 patients with idiopathic or familial parathyroid disorder: pitfalls and characterization of a novel I32 V loss-of-function mutation. Endocrine. 2014-08-05 [PMID: 25091521]

More publications at <http://www.novusbio.com/NB120-19347>



Procedures

Western Blot Protocol for Calcium-sensing R/CaSR Antibody (NB120-19347)

Western Blot Protocol

1. Perform SDS-PAGE on samples to be analyzed, loading 10-25 ug of total protein per lane.
2. Transfer proteins to PVDF membrane according to the instructions provided by the manufacturer of the membrane and transfer apparatus.
3. Stain the membrane with Ponceau S (or similar product) to assess transfer success, and mark molecular weight standards where appropriate.
4. Rinse the blot TBS -0.05% Tween 20 (TBST).
5. Block the membrane in 5% Non-fat milk in TBST (blocking buffer) for at least 1 hour.
6. Wash the membrane in TBST three times for 10 minutes each.
7. Dilute primary antibody in blocking buffer and incubate overnight at 4C with gentle rocking.
8. Wash the membrane in TBST three times for 10 minutes each.
9. Incubate the membrane in diluted HRP conjugated secondary antibody in blocking buffer (as per manufacturer's instructions) for 1 hour at room temperature.
10. Wash the blot in TBST three times for 10 minutes each (this step can be repeated as required to reduce background).
11. Apply the detection reagent of choice in accordance with the manufacturers instructions.

Immunohistochemistry-Paraffin Protocol for Calcium-sensing R/CaSR Antibody (NB120-19347)

Immunohistochemistry-Paraffin Embedded Sections

Antigen Unmasking:

Bring slides to a boil in 10 mM sodium citrate buffer (pH 6.0) then maintain at a sub-boiling temperature for 10 minutes. Cool slides on bench-top for 30 minutes (keep slides in the sodium citrate buffer all the time).

Staining:

1. Wash sections in deionized water three times for 5 minutes each.
2. Wash sections in PBS for 5 minutes.
3. Block each section with 100-400 ul blocking solution (1% BSA in PBS) for 1 hour at room temperature.
4. Remove blocking solution and add 100-400 ul diluted primary antibody. Incubate overnight at 4 C.
5. Remove antibody solution and wash sections in wash buffer three times for 5 minutes each.
6. Add 100-400 ul HRP polymer conjugated secondary antibody. Incubate 30 minutes at room temperature.
7. Wash sections three times in wash buffer for 5 minutes each.
8. Add 100-400 ul DAB substrate to each section and monitor staining closely.
9. As soon as the sections develop, immerse slides in deionized water.
10. Counterstain sections in hematoxylin.
11. Wash sections in deionized water two times for 5 minutes each.
12. Dehydrate sections.
13. Mount coverslips.



Immunocytochemistry/Immunofluorescence Protocol for Calcium-sensing R/CaSR Antibody (NB120-19347)
Immunocytochemistry Protocol

Culture cells to appropriate density in 35 mm culture dishes or 6-well plates.

1. Remove culture medium and wash the cells briefly in PBS. Add 10% formalin to the dish and fix at room temperature for 10 minutes.
2. Remove the formalin and wash the cells in PBS.
3. Permeablize the cells with 0.1% Triton X100 or other suitable detergent for 10 min.
4. Remove the permeablization buffer and wash three times for 10 minutes each in PBS. Be sure to not let the specimen dry out.
5. To block nonspecific antibody binding, incubate in 10% normal goat serum from 1 hour to overnight at room temperature.
6. Add primary antibody at appropriate dilution and incubate overnight at 4C.
7. Remove primary antibody and replace with PBS. Wash three times for 10 minutes each.
8. Add secondary antibody at appropriate dilution. Incubate for 1 hour at room temperature.
9. Remove secondary antibody and replace with PBS. Wash three times for 10 minutes each.
10. Counter stain DNA with DAPI if required.





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Products Related to NB120-19347

NBL1-08721	Calcium-sensing R/CaSR Overexpression Lysate
HAF007	Goat anti-Mouse IgG Secondary Antibody [HRP]
NB720-B	Rabbit anti-Mouse IgG (H+L) Secondary Antibody [Biotin]
NBP1-96778	Mouse IgG2a Isotype Control (M2A)

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