

# Product Datasheet

## Calcium-sensing R/CaSR Antibody (HL 1499) - BSA Free NB100-1830

Unit Size: 0.1 ml

Aliquot and store at -20C or -80C. Avoid freeze-thaw cycles.

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**NB100-1830**

Calcium-sensing R/CaSR Antibody (HL 1499) - BSA Free

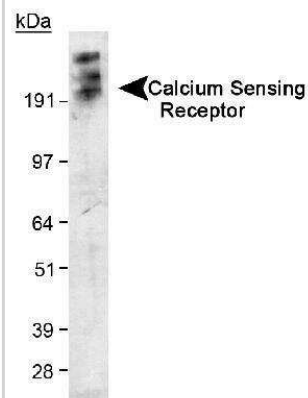
Product Information	
Unit Size	0.1 ml
Concentration	1.0 mg/ml
Storage	Aliquot and store at -20C or -80C. Avoid freeze-thaw cycles.
Clonality	Monoclonal
Clone	HL 1499
Preservative	0.02% Sodium Azide
Isotype	IgG1 Kappa
Purity	Protein G purified
Buffer	PBS
Target Molecular Weight	130 kDa

Product Description	
Description	Novus Biologicals Mouse Calcium-sensing R/CaSR Antibody (HL 1499) - BSA Free (NB100-1830) is a monoclonal antibody validated for use in WB, ELISA, Flow, Simple Western and IP. Anti-Calcium-sensing R/CaSR Antibody: Cited in 5 publications. All Novus Biologicals antibodies are covered by our 100% guarantee.
Host	Mouse
Gene ID	846
Gene Symbol	CASR
Species	Human, Mouse, Rat, Rabbit
Immunogen	N-terminal region of human Calcium Sensing Receptor. [UniProt# P41180]

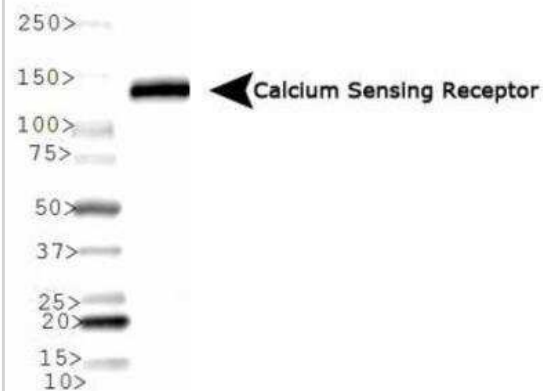
Product Application Details	
Applications	Western Blot, Simple Western, ELISA, Flow Cytometry, Immunoprecipitation, Radioimmunoassay
Recommended Dilutions	Western Blot 1:50 - 1:200, Simple Western 1:200, Flow Cytometry reported in scientific literature (PMID 33830943), ELISA 1:100 - 1:2000, Immunoprecipitation 5 - 10 ug, Radioimmunoassay
Application Notes	In Simple Western only 10 - 15 uL of the recommended dilution is used per data point. See <a href="#">Simple Western Antibody Database</a> for Simple Western validation: Tested in Hek293 lysate 0.5 mg/mL, separated by Size, antibody dilution of 1:200, apparent MW was 148 kDa. Separated by Size-Wes, Sally Sue/Peggy Sue. The observed molecular weight of the protein may vary from the listed predicted molecular weight due to post translational modifications, post translation cleavages, relative charges, and other experimental factors.

## Images

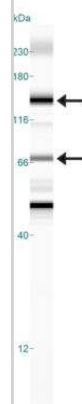
Western Blot: Calcium-sensing R/CaSR Antibody (HL 1499) [NB100-1830] - Detection of Calcium Sensing Receptor in transfected 293 cell lysate using NB 100-1830. ECL exposure, 5 minutes. In this photo, the protein has aggregated and thus the higher MW band as expected.



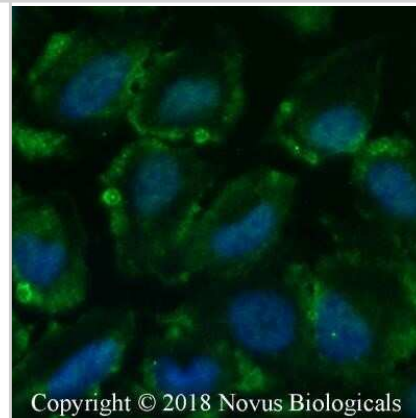
Western Blot: Calcium-sensing R/CaSR Antibody (HL 1499) [NB100-1830] - Analysis of Calcium Sensing Receptor expression in rat kidney tissue.



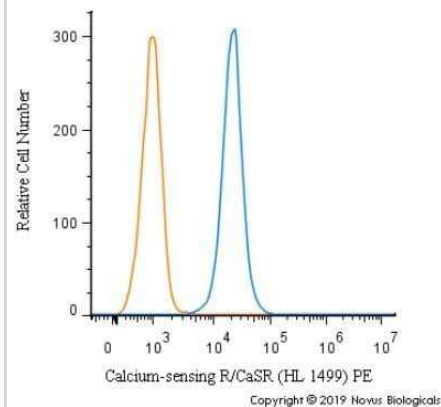
Simple Western: Calcium-sensing R/CaSR Antibody (HL 1499) [NB100-1830] - Image shows a specific band for Calcium Sensing Receptor in 0.5 mg/mL of HEK293 lysate. This experiment was performed under reducing conditions using the 12-230 kDa separation system.



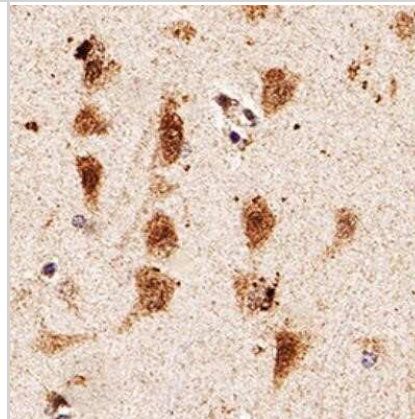
Immunocytochemistry/ Immunofluorescence: Calcium-sensing R/CaSR Antibody (HL 1499) - BSA Free [NB100-1830] - U2OS cells were fixed for 10 minutes using 10% formalin and then permeabilized for 5 minutes using 1X PBS + 0.05% Triton X-100. The cells were incubated with antibody at 5 ug/mL overnight at 4C and detected with an anti-mouse Dylight 488 (Green) at 1:500. Nuclei were counterstained with DAPI (Blue). Cells were imaged using a 40X objective.



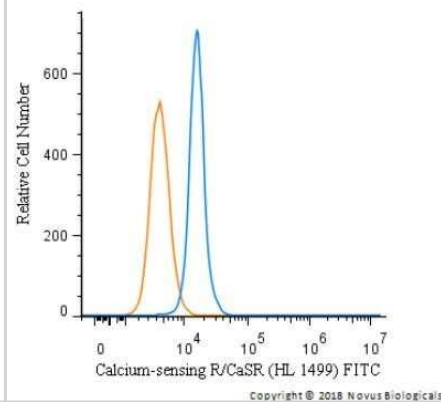
Flow Cytometry: Calcium-sensing R/CaSR Antibody (HL 1499) - BSA Free [NB100-1830] - An intracellular stain was performed on Hek293 cells with Calcium-sensing R/CaSR Antibody (HL 1499) NB100-1830PE (blue) and a matched isotype control (orange). Cells were fixed with 4% PFA and then permeabilized with 0.1% saponin. Cells were incubated in an antibody dilution of 2.5 ug/mL for 30 minutes at room temperature. Both antibodies were directly conjugated to Phycoerythrin.



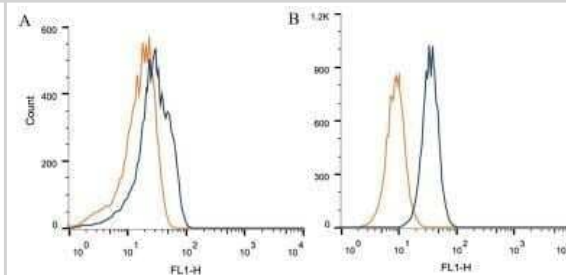
Immunohistochemistry-Paraffin: Calcium-sensing R/CaSR Antibody (HL 1499) - BSA Free [NB100-1830] - Analysis of FFPE human brain using Calcium-sensing R/CaSR antibody at 1:50 on a Bond Rx autostainer (Leica Biosystems). The assay involved 20 minutes of heat induced antigen retrieval (HIER) using 10mM sodium citrate buffer (pH 6.0) and endogenous peroxid



Flow Cytometry: Calcium-sensing R/CaSR Antibody (HL 1499) - BSA Free [NB100-1830] - An intracellular stain was performed on HEK293 cells with Calcium-sensing R/CaSR Antibody [HL 1499] NB100-1830F (blue) and a matched isotype control (orange). Cells were fixed with 4% PFA and then permeabilized with 0.1% saponin. Cells were incubated in an antibody dilution of 5 ug/mL for 30 minutes at room temperature. Both antibodies were directly conjugated to FITC.



Flow Cytometry: Calcium-sensing R/CaSR Antibody (HL 1499) - BSA Free [NB100-1830] - Intracellular flow cytometric staining of  $1 \times 10^6$  CHO (A) and HEK-293 (B) cells using calcium sensing receptor antibody (dark blue). Isotype control shown in orange. Antibody at 1 ug/1 x 10<sup>6</sup> cells.



## Publications

Wu W, Lee S, Chiang B et al. Urothelial Calcium-Sensing Receptor Modulates Micturition Function via Mediating Detrusor Activity and Ameliorates Bladder Hyperactivity in Rats Pharmaceuticals 2021-09-23 [PMID: 34681183] (Rat)

Liu L, Awoyemi AA, Fahy KE et al. Keratinocyte-derived microvesicle particles mediate Ultraviolet B radiation induced systemic immunosuppression The Journal of clinical investigation 2021-04-08 [PMID: 33830943] (FLOW, Human)

Papadopoulou A, Gole E, Moutafi A et al. Calcium sensing receptor in pregnancies complicated by gestational diabetes mellitus Placenta. 2014-06-02 [PMID: 24930987] (WB, Human)

### Details:

Calcium Sensing Receptor antibody (clone HL 1499) used for WB in placentas from healthy women and the pregnancies complicated by gestational diabetes mellitus (GDM) - CaSR expression was found to be lowered in GDM group when compared to healthy placentas.

Szalat A, Benhamron S, Galitzer H et al. Treatment-Resistant Auto-Immune Hypoparathyroidism Associated with Celiac Disease. 90th Annual Meeting of the Endocrine Society (ENDO); San Francisco, CA; USA. 2008-06-15

Awata H et al. Interaction of the calcium-sensing receptor and filamin, a potential scaffolding protein. J Biol Chem;276(37):34871-9. 2001-09-14 [PMID: 11390379]

Handlogten ME et al. The Ca<sup>2+</sup>-sensing receptor activates cytosolic phospholipase A2 via a Gqalpha -dependent ERK-independent pathway. J Biol Chem;276(17):13941-8. 2001-04-27 [PMID: 11278341]



## Procedures

### Western Blot Protocol for Calcium Sensing Receptor Antibody (NB100-1830)

#### Western Blot Protocol

1. Perform SDS-PAGE (3-8%) on samples to be analyzed, loading 25 ug of total protein per lane.
2. Transfer proteins to Nitrocellulose according to the instructions provided by the manufacturer of the transfer apparatus.
3. Stain the blot using ponceau S for 1-2 minutes to access the transfer of proteins onto the nitrocellulose membrane. Rinse the blot in water to remove excess stain and mark the lane locations and locations of molecular weight markers using a pencil.
4. Rinse the blot in TBS for approximately 5 minutes.
5. Block the membrane using 5% non-fat dry milk in TBS for 2 hours at room temperature.
6. Dilute the mouse anti-calcium sensing receptor primary antibody (NB 100-1830) in blocking buffer and incubate 1 hour at room temperature.
7. Wash the membrane in water for 5 minutes and apply the diluted mouse-IgG HRP-conjugated secondary antibody in blocking buffer (as per manufacturer's instructions) and incubate 1 hour at room temperature.
8. Wash the blot in TBS containing 0.05-0.1% Tween-20 for 10-20 minutes.
9. Wash the blot in type I water for an additional 10-20 minutes (this step can be repeated as required to reduce background).
10. Apply the detection reagent of choice in accordance with the manufacturer's instructions (Amersham's ECL is the standard reagent used at Novus Biologicals).

Note: Tween-20 can be added to the blocking buffer at a final concentration of 0.05-0.2%, provided it does not interfere with antibody-antigen binding.





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### **Products Related to NB100-1830**

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NB820-59231	Human Kidney Whole Tissue Lysate (Adult Whole Normal)
NBP2-33376H	Blue Marker Antibody (6F4-F6) [HRP]
HAF007	Goat anti-Mouse IgG Secondary Antibody [HRP]
NB7539	Goat anti-Mouse IgG (H+L) Secondary Antibody [HRP]
NBP1-43319-0.5mg	Mouse IgG1 Kappa Isotype Control (P3.6.2.8.1)

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### **Limitations**

This product is for research use only and is not approved for use in humans or in clinical diagnosis. Primary Antibodies are guaranteed for 1 year from date of receipt.

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