

# CaSR (A-18): sc-32182

## BACKGROUND

Extracellular calcium-sensing receptor (CaSR), also designated parathyroid cell calcium-sensing receptor, is an integral membrane protein that belongs to the G protein-coupled receptor 3 family. CaSR is involved in maintaining a stable calcium concentration by acting as a sensor of the extracellular calcium levels for the parathyroid and kidney. Its activity is mediated by a G protein which activates a phosphatidylinositol-calcium second messenger system. Defects that activate CaSR cause autosomal dominant hypocalcemia, whereas mutations that inactivate the protein cause familial hypocalciuric hypercalcemia. CaSR is expressed mainly in kidney, and is also expressed in intestine, placenta and brain.

## REFERENCES

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- Freichel, M., et al. 1996. Expression of a calcium-sensing receptor in a human medullary thyroid carcinoma cell line and its contribution to calcitonin secretion. *Endocrinology* 137: 3842-3848.
- Bikle, D.D., et al. 1996. Changes in calcium responsiveness and handling during keratinocyte differentiation. Potential role of the calcium receptor. *J. Clin. Invest.* 97: 1085-1093.
- Stock, J.L., et al. 1999. Autosomal dominant hypoparathyroidism associated with short stature and premature osteoarthritis. *J. Clin. Endocrinol. Metab.* 84: 3036-3040.
- Nakayama, T., et al. 2001. A novel mutation in  $\text{Ca}^{2+}$ -sensing receptor gene in familial hypocalciuric hypercalcemia. *Endocrine* 15: 277-282.
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## CHROMOSOMAL LOCATION

Genetic locus: CASR (human) mapping to 3q21.1; Casr (mouse) mapping to 16 B3.

## SOURCE

CaSR (A-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an N-terminal extracellular domain of CaSR of human origin.

## PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-32180 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

CaSR (A-18) is recommended for detection of Extracellular calcium-sensing receptor of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

CaSR (A-18) is also recommended for detection of Extracellular calcium-sensing receptor in additional species, including equine and porcine.

Suitable for use as control antibody for CaSR siRNA (h): sc-44373, CaSR siRNA (m): sc-44374, CaSR shRNA Plasmid (h): sc-44373-SH, CaSR shRNA Plasmid (m): sc-44374-SH, CaSR shRNA (h) Lentiviral Particles: sc-44373-V and CaSR shRNA (m) Lentiviral Particles: sc-44374-V.

Molecular Weight of CaSR: 160 kDa.

Positive Controls: Caki-1 cell lysate: sc-2224, rat brain extract: sc-2392 or U-2 OS cell lysate: sc-2295.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## STORAGE

Store at 4° C, \*\*DO NOT FREEZE\*\*. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## RESEARCH USE

For research use only, not for use in diagnostic procedures.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.



Try **CaSR (6D4): sc-47741**, our highly recommended monoclonal alternative to CaSR (A-18).