BACKGROUND

GPRC6A (G protein-coupled receptor family C group 6 member A) is a 928 amino acid protein encoded by the mouse Gprc6a gene. GPRC6A is a member of the G protein-coupled receptor 3 family. This receptor is activated by both amino acids and extracellular concentration of calcium ions. The activity of GPRC6A is mediated by a G protein that activates a phosphatidylinositol-calcium second messenger system. GPRC6A senses changes in the extracellular concentration of calcium ions, suggesting that it may mediate extracellular calcium-sensing responses in osteoblasts. Osteocalcin stimulates the activity of GPRC6A in the presence of calcium. GPRC6A also acts as a receptor for amino acids, with a preference for basic amino acids such as L-Lys, L-Arg and L-ornithine. Its affinity for amino acids suggests that it may act as a regulatory component of the urea cycle. GPRC6A is expressed at high levels in liver, lung, spleen and heart, and at lower levels in kidney, skeletal muscle and brain.

REFERENCES


CHROMOSOMAL LOCATION

Genetic locus: GPRC6A (human) mapping to 6q22.1; Gprc6a (mouse) mapping to 10 B3.

SOURCE

GPRC6A (M-166) is a rabbit polyclonal antibody raised against amino acids 1-166 mapping within an N-terminal extracellular domain of GPRC6A of mouse origin.

RESEARCH USE

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

PRODUCT

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

APPLICATIONS

GPRC6A (M-166) is recommended for detection of GPRC6A of mouse, rat and, to a lesser extent, human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation (1-2 µg per 100-500 µl of total protein [1 ml of cell lysate]), 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).

GPRC6A (M-166) is also recommended for detection of GPRC6A in additional species, including canine.


Molecular Weight of GPRC6A: 105 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2780 and 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.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.