Human Calcium-sensing R/CaSR Alexa Fluor® 488-conjugated Antibody

Monoclonal Mouse IgG_{2A} Clone # 611825

Catalog Number: FAB9608G

100 µg

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human Calcium-sensing R/CaSR protein in direct ELISAs.
Source	Monoclonal Mouse IgG_{2A} Clone # 611825
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Mouse myeloma cell line NS0-derived transfected with recombinant human Calcium-sensing R/CaSR protein Tyr20-Lys601 Accession # P41180-1
Conjugate	Alexa Fluor 488 Excitation Wavelength: 488 nm Emission Wavelength: 515-545 nm
Formulation	Supplied 0.2 mg/mL in a saline solution containing BSA and Sodium Azide. See Certificate of Analysis for details. *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.

APPLICATIONS

Please Note: *Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.*

	Recommended Concentration	Sample
Flow Cytometry	0.25-1 µg/10^6 cells	HEK293 Human Cell Line Transfected with Human Calcium-sensing R/CaSR and eGFP

PREPARATION AND STORAGE

Shipping	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	**Protect from light. Do not freeze.** • 12 months from date of receipt, 2 to 8 °C as supplied.

BACKGROUND

Calcium-sensing receptor (CasR) is a plasma membrane G-protein-coupled receptor that senses changes in the extracellular concentration of calcium ions and plays a key role in maintaining calcium homeostasis (1). CasR is expressed in the parathyroid hormone-producing chief cells of the parathyroid gland, and the cells lining the kidney tubule (2). Mutations in this gene cause familial hypocalciuric hypercalcemia, familial, isolated hypoparathyroidism, and neonatal severe primary hyperparathyroidism (3). The full length of CasR has a large extracellular N-terminal domain, a central region of 7 transmembrane domains, and a long intracellular C-terminal domain. The amino acid 20-601 contains the extracellular domain with multiple glycosylation sites (4). Human CasR shares 96.1% and 96.5% aa sequence identity with mouse and rat CasR, respectively.

References:

1. Geng, Y. *et al.* (2016) Elife **5**:e13662.
2. Hendy, G. N. *et al.* (2000) Hum. Mutat. **16**:281.
3. Brown, E. M. *et al.* (1993) Nature **366**:575.
4. Garrett, J. E.*et al.* (1995) J. Biol. Chem. **270**:12919.

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