

DESCRIPTION

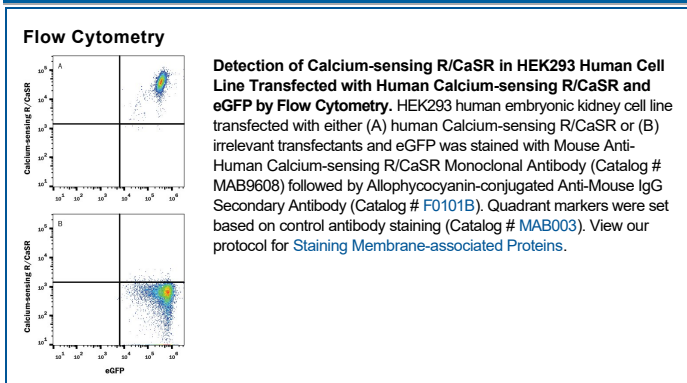
Species Reactivity	Human
Specificity	Detects human Calcium-sensing R/CaSR protein in direct ELISAs.
Source	Monoclonal Mouse IgG _{2A} Clone # 611825
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Mouse myeloma cell line NS0-derived transfected with recombinant human Calcium-sensing R/CaSR protein Tyr20-Lys601 Accession # P41180-1
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied either lyophilized or as a 0.2 µm filtered solution in PBS.

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 µg/10 ⁶ cells	See Below
CyTOF-ready	Ready to be labeled using established conjugation methods. No BSA or other carrier proteins that could interfere with conjugation.	

DATA



PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.5 mg/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
Stability & Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. <ul style="list-style-type: none"> • 12 months from date of receipt, -20 to -70 °C as supplied. • 1 month, 2 to 8 °C under sterile conditions after reconstitution. • 6 months, -20 to -70 °C under sterile conditions after reconstitution.

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.