Anti-Calcium Channel (γ3 Subunit)
Developed in Rabbit, Fractionated Antibody

Product Number C 6238

Product Description
Anti-Calcium Channel γ3 subunit is developed in rabbit using as immunogen a synthetic peptide derived from the rat γ3 calcium channel subunit conjugated to KLH. The antiserum is purified by ammonium sulfate precipitation. A synthetic peptide derived from the rat γ3 calcium channel subunit conjugated to KLH from human, mouse and rat. It is used in immunoblotting applications.

Voltage-gated calcium channels (VGCCs) are present in most excitable cells. There are five high-voltage activated calcium channel types (L, N, P, Q, and R) and one low-voltage activated channel type (T). Each of these channels exists as a heteromultimer of α1, β, α2/δ and γ subunits with the voltage-activated calcium channel function carried by the α subunits.1 VGCCs exert spatial and temporal control over cellular calcium concentrations and serve to modulate neurotransmitter release, hormone secretion, muscle contraction, electrical activity, cell metabolism and proliferation, gene expression, and neuronal survival.2,3 Evidence suggests that calcium channel α1 subunit function may be modulated via interactions with other cellular proteins.3

Upon co-expression with the α1.1, α2/δ1, or β1α subunits of the skeletal muscle VDCC, γ subunits alter the peak currents and the kinetics of channel activation and inactivation, normalizing these currents to resemble an endogenous channel.4 Together, these results suggest that γ subunits modulate skeletal muscle VDCCs by stabilizing their conformation. The calcium channel γ3 subunit is specifically localized in the brain with the γ2 and γ4 subunits. It shares >60% sequence homology with the calcium channel γ2 and calcium channel γ4 subunits and ~25% sequence homology with the calcium channel γ1 and γ5 subunits.5

Reagent
Anti-Calcium Channel γ3 subunit is supplied at approximately 1 mg/ml as a solution in phosphate buffered saline containing 0.08% sodium azide. The amount of the reagent is sufficient for 10 blots.

Precautions and Disclaimer
Due to the sodium azide content, a material safety data sheet (MSDS) for this product has been sent to the attention of the safety officer of your institution. Consult the MSDS for information regarding hazardous and safe handling practices.

Storage/Stability
Store at −20 °C. For extended storage, upon initial thawing, freeze in working aliquots. Do not store in frost-free freezers. Avoid repeated freezing and thawing to prevent denaturing the antibody. Working dilution samples should be discarded if not used within 12 hours. The antibody is stable for at least 6 months when stored appropriately.

Product Profile
A recommended working concentration of 5 to 10 µg/ml is determined by immunoblotting using rat brain tissue lysate.

Note: In order to obtain best results in different techniques and preparations we recommend determining optimal working concentration by titration test.

References