

Certificate of Analysis

Product: Affinity Purified anti-Frequenin* (recombinant) [Chicken]

Code: 600-901-216

Lot # 17210

Size: 200 ug

Physical State: Liquid (sterile filtered)

Antibody Concentration: 1.5 mg/ml (by UV absorbance at 280 nm)

Buffer: 0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2

Stabilizer: None

Preservative: 0.01% (w/v) Sodium Azide

Application(s): Suitable for ELISA, immunoblotting, immunohistochemistry, conjugation and most immunological methods requiring lot-to-lot consistency, high titer and specificity.

Recommended Dilution(s): This product was assayed by immunoblot and found to be reactive against Frequenin at a dilution of 1:5000 followed by reaction with Peroxidase conjugated Affinity Purified anti-Chicken IgG [H&L] (Goat) code #603-1302. Anti-Frequenin is suitable for the detection by immunoblot of human, mouse and rat Frequenin. Optimal titers for other applications should be determined by the researcher.

Storage Conditions: Store vial at -20° C prior to opening. Dilute only prior to immediate use. For extended storage aliquot contents and freeze at -20° C or below. Avoid cycles of freezing and thawing. Expiration date is one (1) year from date of opening product.

Purity: This product was prepared from chicken egg yolk by selective precipitation followed by immunoaffinity chromatography using Frequenin (recombinant) coupled to agarose beads. Assay by immunoelectrophoresis resulted in a single precipitin arc against anti-Chicken Serum.

Specificity: This affinity purified polyclonal antibody reacts with frequenin from most mammalian sources. Frequenin is a Ca²⁺ binding protein implicated in the regulation of neurotransmitter release at the neuromuscular junction. Frequenin amino acid sequences from different species appear closely related. In mouse a single 4.2 kbp mRNA is produced yielding a protein of 22kDa when assayed by SDS-PAGE under reducing conditions. Frequenin may colocalize with the dendritic marker MAP-2 and is widely distributed in the brain, spinal cord and dorsal root ganglia. Reactivity with avian and invertebrate frequenin is likely. In *Drosophila* frequenin is related to recoverin and visinin and functions like Ca²⁺-sensitive guanylyl cyclase activator.

Immunogen: Frequenin (recombinant from Mouse with extensive post-translational modifications)

Note: This product is for research use only and is not intended for therapeutic or diagnostic applications. Please contact a technical service representative for more information. *Frequenin is the term used to describe the invertebrate homolog of NCS-1 (neuronal calcium sensor-1). The term NCS-1 has been reserved for the protein observed in humans and other mammals, whereas frequenin has been used to describe the homolog in *Drosophila* and *Xenopus*.

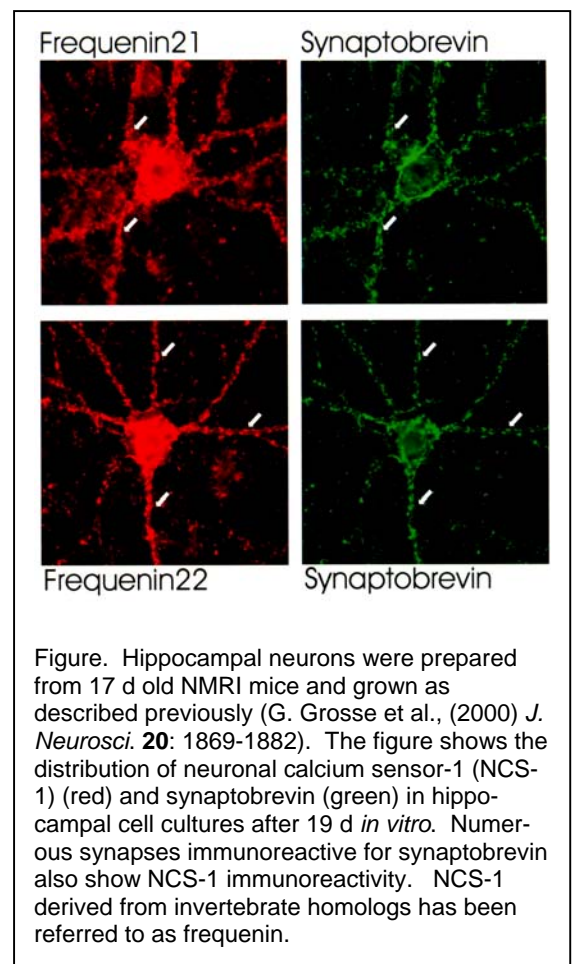


Figure. Hippocampal neurons were prepared from 17 d old NMRI mice and grown as described previously (G. Grosse et al., (2000) *J. Neurosci.* **20**: 1869-1882). The figure shows the distribution of neuronal calcium sensor-1 (NCS-1) (red) and synaptobrevin (green) in hippocampal cell cultures after 19 d *in vitro*. Numerous synapses immunoreactive for synaptobrevin also show NCS-1 immunoreactivity. NCS-1 derived from invertebrate homologs has been referred to as frequenin.