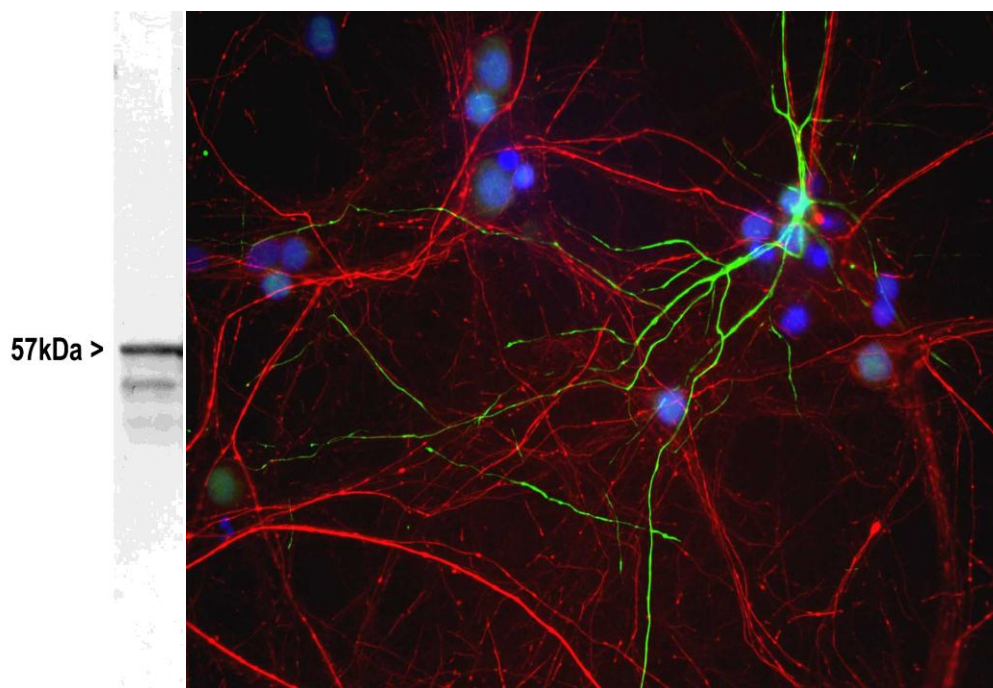


**Catalogue# RPCA-Peri: Rabbit Polyclonal Antibody to the Intermediate Filament Protein Peripherin**

**The Immunogen:** Peripherin is a ~57 kDa intermediate filament subunit found initially in sensory neurons of the peripheral nervous systems, which gives the protein its name (1). Subsequently, peripherin was found in some sensory and other neurons of the central nervous system and also in rat pheochromocytoma PC12 cells (2,3). Peripherin is also expressed in certain neuroendocrine tumors and in the insulin producing cells of the pancreas. Peripherin belongs to the Class III family of intermediate filament subunits which also includes vimentin, glial fibrillary acidic protein (GFAP) and desmin.

Antibodies to peripherin can be used in identifying, classifying, and studying neurons throughout the nervous system. Peripherin is also a good diagnostic marker for ballooned axons seen in Lou Gehrig's disease (Amyotrophic lateral sclerosis) and some neuronally derived tumors. Autoantibodies to peripherin are frequently seen in the sera of patients with diabetes. Peripherin is not related to peripherin/RDS, a protein of the photoreceptor outer membrane mutations of which are causative of certain forms of slow retinal degeneration.

The characterization of an antibody produced in the same way as RPCA-Peri has been published (4). The [HGNC](#) name for this protein is [PRPH](#).



**Left:** Western blot of rat brain stem homogenate stained with RPCA-Peri, at dilution of 1:20,000. A prominent band running with an apparent SDS-PAGE molecular weight of ~57 kDa corresponds to Peripherin. A lower band at ~48 kDa is derived from the Peripherin molecule. **Right:** Mixed neuron/glia cultures from newborn rat brain stained with RPCA-Peri antibody to peripherin (green) and chicken polyclonal antibody to phosphorylated NF-H ([CPCA-NF-H](#)) (red channel). A class of large neurons, like the one in the top right of this image, contain peripherin, while the majority of neurons and their processes contain NF-H and not peripherin. The blue channel reveals the localization of DNA.

**Antibody Characteristics:** Antibody was raised in rabbit against recombinant full length peripherin purified from *E. coli*. Antibody is supplied as an aliquot of serum. The production and characterization of a similar but not identical antibody was described in reference 4 below. Store at 4°C or -20°C. Avoid repeat freezing and thawing.

**Suggestions for use:** Try at dilutions of 1:500 to 1:1,000 for immunofluorescence, and 1:5,000 for ABC or other enzyme linked immunocytochemical procedures. For western blots try at 1:5,000 to 1:20,000. Antibody also recognizes a prominent band at ~57 kDa in spinal cord homogenates or homogenates of PC12 cells.

**References:**

1. Portier MM, de Néchaud B, Gros F. Peripherin, a new member of the intermediate filament protein family. [Dev Neurosci. 6:335-44 \(1984\)](#)
2. Troy CM, Brown K, Greene LA, Shelanski ML. Ontogeny of the neuronal intermediate filament protein, peripherin, in the mouse embryo. [Neuroscience. 36:217-37 \(1990\)](#).
3. Aletta JM, Angeletti R, Liem RK, Purcell C, Shelanski ML, Greene LA. Relationship between the nerve growth factor-regulated clone 73 gene product and the 58-kilodalton neuronal intermediate filament protein (peripherin). [J Neurochem. 51:1317-20 \(1988\)](#).
4. Errante LD, Wiche G and Shaw G. Distribution of plectin, an intermediate filament-associated protein, in the adult rat central nervous system [J. Neurosci. Res. 37:515-528 \(1994\)](#).

**Limitations:** This product is for research use only and is not approved for use in humans or in clinical diagnosis.

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