

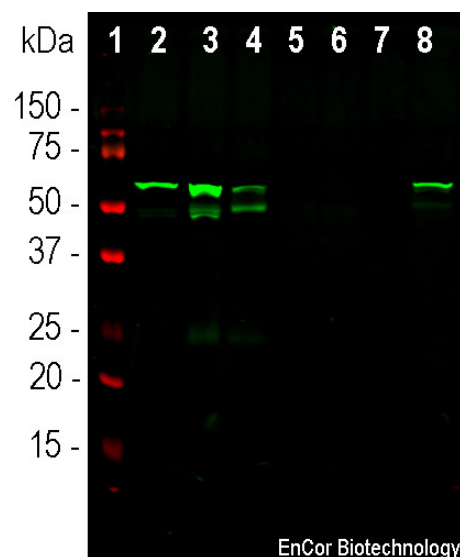
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HGNC Name: PRPH
UniProt: P41219
RRID: AB_2572374
Immunogen: Recombinant rat peripherin purified from *E. coli*
Format: Purified antibody at 1mg/mL in 50% PBS, 50% glycerol plus 5mM NaN₃
Storage: Stable at 4°C for one year, for longer term store at -20°C
Recommended dilutions:
 WB: 1:1,000. IF/ICC: 1:200 IHC: 1:1,000

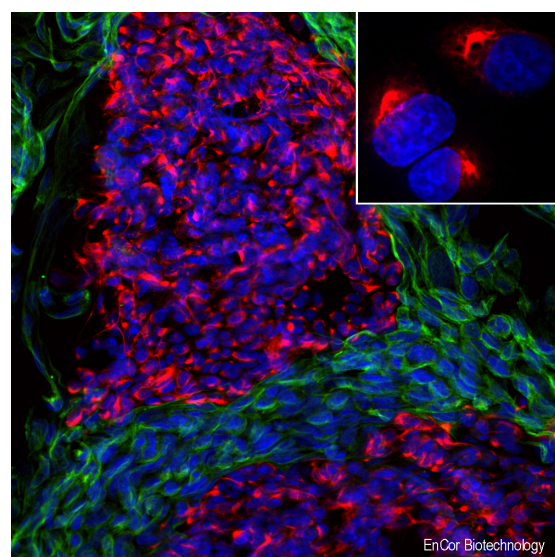
References:

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Applications	Host	Isotype	Molecular Wt.	Species Cross-Reactivity
WB, IF/ICC, IHC of rodent tissue	Mouse	IgG1	~57kDa	Rt, Ms, not Hu



Western blot analysis of tissue and cell lysates using mouse mAb to peripherin, MCA-7C5, dilution 1:1,000 in green: [1] protein standard, [2] rat spinal cord, [3] rat sciatic nerve, [4] mouse spinal cord, [5] pig spinal cord, [6] cow spinal cord, [7] SH-SY5Y cells, and [8] PC12 cells. The band at ~57kDa corresponds to the peripherin protein detected only in rat and mouse lysates, since the antibody is rodent specific.



Immunofluorescent analysis of mixed fibroblast and rat pheochromocytoma PC12 cell culture stained with mouse mAb to peripherin, MCA-7C5, dilution 1:500 in red, and costained with chicken pAb to vimentin, CPCA-Vim, dilution 1:10,000, in green. The blue is Hoechst staining of nuclear DNA. The MCA-7C5 antibody reveals cytoplasmic filamentous staining in the small PC12 cells, while vimentin antibody stains intermediate filaments in the surrounding fibroblastic cells which do not express peripherin.

Background:

Peripherin is a ~57kDa 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 as a major cytoskeletal protein in rat pheochromocytoma PC12 cells (2,3). Peripherin is expressed in certain neuroendocrine cells and in the insulin producing cells of the pancreas, and autoantibodies to peripherin may be seen in diabetes mellitus (4). It is also prominently expressed in certain tumors and in the ballooned axons typical of amyotrophic lateral sclerosis (5,6). Different classes of neuron and nerve fiber may be identified based on their expression of peripherin, NF-L and other markers (e.g. 7). There are multiple transcripts from the single peripherin gene, some of which encode proteins which produce proteins unable to form intermediate filaments and which induce the formation of pathological inclusions (8,9). Note that the intermediate filament subunit peripherin (HGNC PRPH) is completely unrelated to peripherin/RDS (HGNC PRPH2), a retinal protein belonging to the tetraspanin family.

The MCA-7C5 antibody was made against full length recombinant rat peripherin expressed in and purified from *E. coli*. It recognizes rat and mouse peripherin but does not recognize the human, pig or bovine proteins. The antibody works well for western blotting and for IF, ICC and IHC on rodent material (for IHC see data under "Additional Info" tab). We also manufacture a mouse monoclonal antibody to peripherin which has been used in studies of peripherin expression for many years and in many peer reviewed publications, MCA-8G2 which recognizes peripherin in human, rodent and other species. We also made rabbit and chicken polyclonal antibodies to peripherin, RPCA-Peri, and CPCA-Peri.

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Abbreviation Key:

mAb—Monoclonal Antibody pAb—Polyclonal Antibody WB—Western Blot IF—Immunofluorescence ICC—Immunocytochemistry
 IHC—Immunohistochemistry E—ELISA Hu—Human Mo—Monkey Do—Dog Rt—Rat Ms—Mouse Co—Cow Pi—Pig Ho—Horse Ch—Chicken
 Dr—D. rerio Dm—D. melanogaster Sm—S. mutans Ce—C. elegans Sc—S. cerevisiae Sa—S. aureus Ec—E. coli.