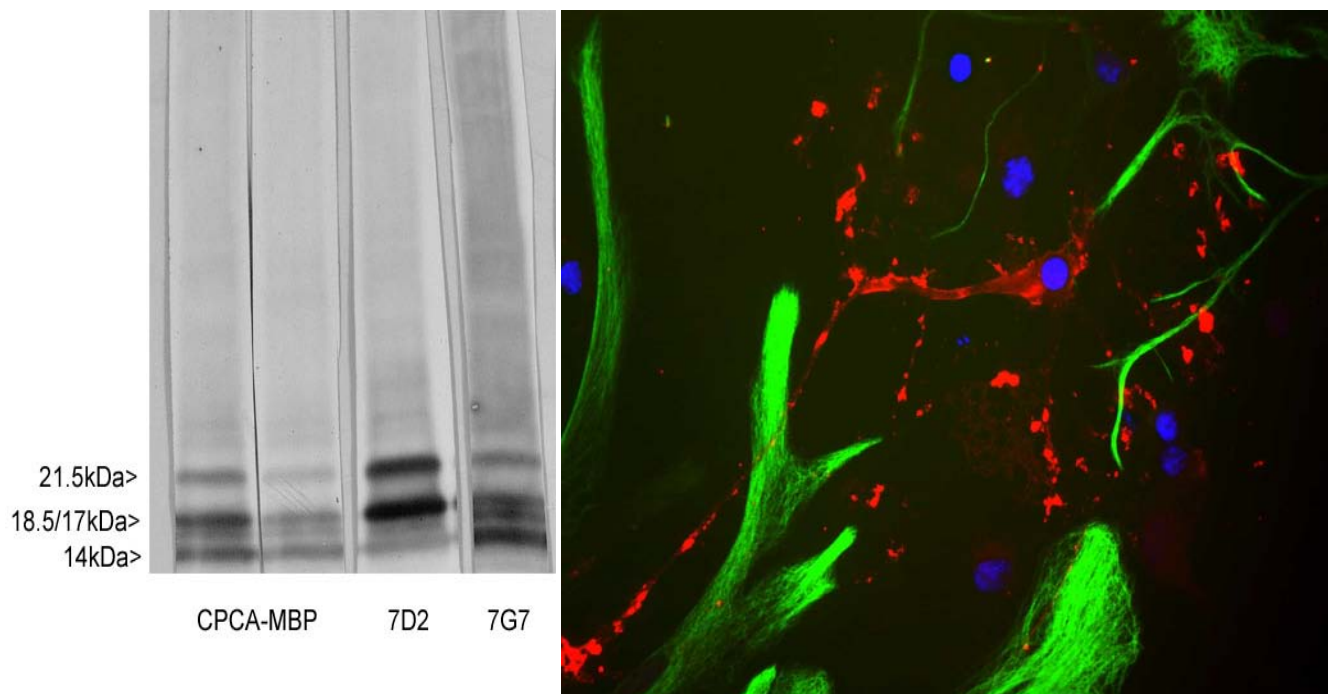


Catalogue #CPCA-MBP: Chicken Polyclonal Antibody to Myelin Basic Protein Lot#6351

The Immunogen: Myelin Basic Protein (MBP) is one of the major proteins of the myelin sheath surrounding axons in the nervous system. Since it is of relatively low molecular weight and high abundance the protein sequence was determined from purified protein over 30 years ago (1). The protein is made by oligodendrocytes in the central nervous system, so antibodies to MBP are good markers of this cell type. However, transcripts from the same gene are also expressed in certain hematopoietic lineage cells (2). In the central nervous system there are three different forms of the protein made by alternate transcription from a single gene, which have molecular weights of 21.5, 18.5, and 17.2 kDa. Since the two lower molecular weight forms are very close in molecular size, MBP antibodies typically show two bands on Western blots, one at about 22 kDa and another at about 18 kDa.

Antibody Characteristics: Antibody was raised in chicken against purified myelin basic protein isolated from cow nerve. This antibody is an IgY preparation, with total protein content of 22.9 mg/mL. The preparation contains 0.02% sodium azide as a preservative. Store at 4°C or -20°C. Avoid repeat freezing and thawing.



Figures: Left: Blots of whole tissue homogenate of rat spinal cord probed with CPCA-MBP, chicken antibody to Myelin Basic Protein, in the first two lanes. The antibody stains 21.5 kDa, 18.5kDa, 17kDa and 14kDa, all four CNS isotypes of rat myelin basic protein. Our two monoclonals to MBP, [MCA-7G7](#) and [MCA-7D2](#), show similar staining in the lanes indicated, although MCA-7D2 shows stronger binding for the 21.5 kDa and 18.5 kDa isotypes. **Right:** Rat mixed neuron/glial cultures stained with chicken polyclonal antibody to Myelin Basic Protein, CPCA-MBP (green). Blue is a DNA stain. Note that the Myelin Basic Protein antibody stains an oligodendrocyte and some membrane shed from this cell. Other cells in the field include neurons, astrocytes, microglia and fibroblasts, all of which are completely negative for myelin basic protein. Astrocytes are stained, in green with [MCA-5C10](#), our monoclonal antibody to glial fibrillary acidic protein (GFAP), and excellent marker of astrocytes. specifically, and that the staining is concentrated in the cell bodies.

Suggestions for use: Try at dilutions of 1:1,000 and higher for immunofluorescence. For western blots try at 1:10,000. A suitable control tissue is rat spinal cord or peripheral nerve homogenate. The major isoforms of MBP run as a closely spaced double of 22 kDa and 18 kDa.

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

References:

1. Eylar EH, Brostoff S, Hashim G, Caccam J, Burnett P. Basic A1 protein of the myelin membrane. The complete amino acid sequence. [J. Biol. Chem. 246:5770-5784 \(1971\).](#)

2. Marty MC, Alliot F, Rutin J, Fritz R, Trisler D. and Pessac B. The myelin basic protein gene is expressed in differentiated blood cell lineages and in hemopoietic progenitors. [Proc. Nat. Acad. Sci. 99:8856-8861 \(2002\).](#)

©EnCor Biotechnology Inc. November 26, 2014.