

Cat. No: MAB-94390
Conjugate: Unconjugated
Size: 100 ug
Clone: 3C9
Concentration: 1mg/ml
Host: Mouse
Isotype: IgG1
Immunogen: Full-length recombinant human protein expressed in and purified from E. coli.
Reactivity: Hu Rt Ms

Applications: Western Blot: 1:1,000-1:5,000
 Immunocytochemistry: 1:1,000-1:5,000
 Immunofluorescence: 1:1,000-1:5,000
 Immunohistochemistry: 1:1,000-1:5,000

Molecular Weight: 12kDa

Purification: Purified

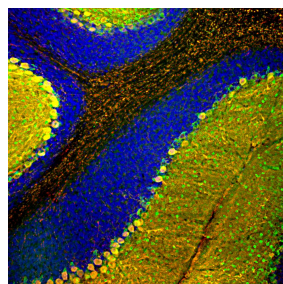
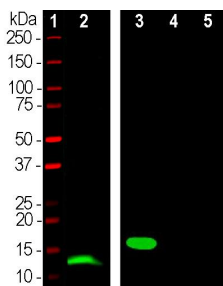
Background:

Parvalbumin is a low molecular weight cytoplasmic Calcium binding protein containing the "EF hand" Calcium binding motif and is the first protein characterized in this subclass (1). Parvalbumin is expressed in fast-contracting muscles, in the brain and in some endocrine tissues (2,3). In brain it is particularly concentrated in Purkinje cells and interneurons in the molecular layer, but is also found in many cortical GABAergic interneurons. These GABAergic interneurons in most cases express only one of three Calcium binding proteins, namely parvalbumin, calretinin or calbindin (4-6). Each type of interneuron has distinct electrophysiological properties and as a result, different types of interneuron can be identified and classified based on their content of these three proteins (7). MAB-94390 antibody was made against full length recombinant human parvalbumin expressed in and purified from E. coli. Since parvalbumin is related in amino acid sequence to both calretinin and calbindin, we also expressed these proteins to check that our various reagents show no cross reactivity. So our antibodies to parvalbumin are useful cell type markers provided, as is the case with this antibody, they do not cross react with the related molecules calretinin or calbindin

Form: Liquid

Buffer: Purified antibody at 1mg/mL in 50% PBS, 50% glycerol plus 5mM Na₃

Storage: Stable at 4°C for one year, for longer term store at -20°C



Western blot analysis of skeletal muscle lysates and His-tagged recombinant proteins using mouse mAb to parvalbumin, MAB-94390 dilution 1:1,000 in green: [1] protein standard (red), [2] mouse muscle, [3] full length human parvalbumin, [4] full length human calretinin, and [5] full length human calbindin. A band at 12kDa is detected in muscle lysate and one at 18kDa in the His-tagged recombinant parvalbumin protein lane as expected since the His-tag and other vector derived sequence adds about 6kDa to the molecule. Note that the MAB-94390 antibody is not cross-reactive with either calbindin or calretinin despite their related amino acid sequences.

Immunofluorescent analysis of rat cerebellum section stained with mouse mAb to parvalbumin, MAB-94390 dilution 1:1,000, in green, and costained with chicken pAb to calbindin, dilution 1:2,000 in red. The blue is DAPI staining of nuclear DNA. Following transcardial perfusion of rat with 4% paraformaldehyde, brain was post fixed for 24 hours, cut to 45 μ M, and free-floating sections were stained with above antibodies. Most Purkinje cells strongly express both parvalbumin and calbindin and so appear yellow, whereas basket, stellate and Golgi cells express parvalbumin alone and so appear green.

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