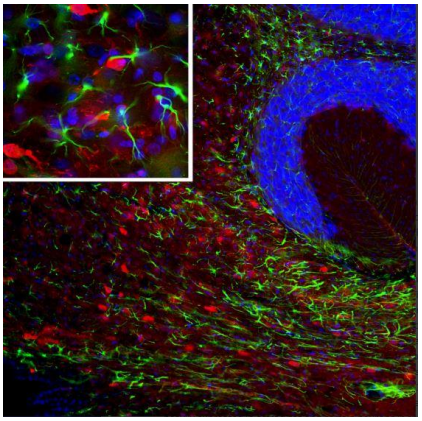
NEUROMICS

PEA-15 Data Sheet

Catalog Number:	MO22197	**Host:**	Mouse
Product Type:	Mouse monoclonal IgG	**Species Reactivity:**	Human, rat, mouse, and cow
Immunogen Sequence:	Full length human PEA-15 as expressed in and purified from *E. coli*	**Format:**	Purified antibody at 1mg/mL in 50% PBS, 50% glycerol plus 5mM NaN3
Applications:	Immunofluorescent: 1:1,000-2,000 Immunocytochemistry: 1:1,000-2,000 Western Blot: 1:1,000-2,000 Dilutions listed as a recommendation. Optimal dilution should be determined by investigator.		
Storage:	Antibody can also be aliquotted and stored frozen at -20° C in a manual defrost freezer for six months without detectable loss of activity. The antibody is stable at 2° - 8° C for 1 year. Avoid repeated freeze-thaw cycles.		

Application Notes

Description/Data:
PEA-15 was originally isolated as a major low molecular weight of embryonic mouse striatal astrocytes grown in cell culture. Three spots on 2D gels with an apparent molecular weight of 15kDa and isoelectric point 5.1-5.3 were shown to be different forms of one protein. The protein was serine phosphorylated on one site by protein kinase C both *in vivo* and *in vitro* and the protein was named “phosphoprotein enriched in astrocytes of 15kDa”, hence PEA-15. Subsequent cloning and sequencing revealed a protein well conserved in sequence between mouse and human and which was heavily expressed in brain. Independently the same protein was found to be upregulated in fibroblasts and tissues of diabetic patients, and has hence named “protein enriched in diabetes” or PED. Immunocytochemical studies showed that the protein was heavily expressed in astrocytes and certain neurons in the CNS of mice, though it is expressed a lower levels ubiquitously. PEA-15 was shown to interact with extracellular signal regulated kinase and regulate the nuclear entry of this protein, and several other important interactions with other proteins involved in regulation of apoptosis, glucose metabolism and cell growth have been described. MCA-4D2 was made against a recombinant full length PEA-15 construct expressed in and purified from *E. coli*.



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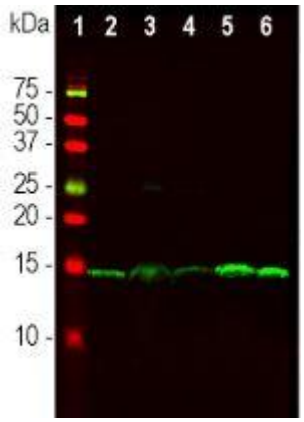
Images: ***Immunofluorescence:*** *Immunofluorescent analysis of rat brain section stained with mouse mAb to PEA-15, MO22197, dilution 1:1,000 in red, and costained with rabbit pAb to GFAP, dilution 1:5,000 in green. The blue is Hoechst staining of nuclear DNA. Following transcardial perfusion of rat with 4% paraformaldehyde, brain was post fixed for 24 hours, cut to 45µM, and free-floating sections were stained with above antibodies. The PEA-15 antibody labels the cytoplasm of certain cells which are not labelled by the astrocyte specific GFAP antibody.* ***Western Blot:*** *Western blot analysis of different tissue lysates using mouse mAb to protein PEA-15, dilution 1:1,000 in green: [1] protein standard (red), [2] rat whole brain, [3] rat cerebellum, [4] mouse whole brain, [5] cow cortex and [6] cow cerebellum. The single strong band at about 15kDa corresponds to the PEA-15 protein.*



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