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RABBIT ANTI-GLIAL FIBRILLARY ACIDIC PROTEIN-δ (GFAP-δ) POLYCLONAL ANTIBODY

CATALOG NUMBER: AB9598

LOT NUMBER:

QUANTITY: 100 µL

SPECIFICITY: Glial Fibrillary Acidic Protein-δ (GFAP-δ). The antibody does not recognize GFAP-α protein.

BACKGROUND: Human Glial Fibrillary Acidic Protein delta (GFAP-δ) is a GFAP protein isoform that is encoded by an alternative splice variant of the GFAP-gene. As a result, GFAP-δ protein differs from the predominant splice form, GFAP-α, by its C-terminal protein sequence. GFAP-δ protein is not expressed by all GFAP expressing astrocytes but specifically by a subpopulation located in the subpial zone of the cerebral cortex, the subgranular zone of the hippocampus and, most intensely, by a ribbon of astrocytes following the ependymal layer of the cerebral ventricles. Therefore, at least in the sub ventricular zone (SVZ), GFAP-δ specifically marks the population of astrocytes that contain the neural stem cells in the adult human brain. Interestingly, the SVZ astrocytes actively splice GFAP-δ transcripts, in contrast to astrocytes adjacent to this layer. Data shows that GFAP-δ protein, unlike GFAP-α, is not upregulated in astrogliosis. Data indicates a different functional role for GFAP-δ in astrocyte physiology. Transfection studies showed that GFAP-δ protein expression has a negative effect on GFAP filament formation, and therefore could be important for modulating intermediate filament cytoskeletal properties, possibly facilitating astrocyte motility. Further studies on GFAP-δ and the cells that express it are important for gaining insights into its function during differentiation, migration and during health and disease (Roelofs, RF, et al., *Glia* (2005) **52**:289-300.).

IMMUNOGEN: Synthetic peptide from human GFAP-δ.

APPLICATIONS: Western blot: 1:500 with overnight incubation. The antibody recognizes the ~60 kDa GFAP-δ protein.
Immunohistochemistry: 1:500 incubated for 36-48 hours at 2-8°C on paraffin embedded tissue sections. It is suggested that the tissue be treated with microwave antigen retrieval prior to staining.
Optimal working dilutions must be determined by the end user.

SPECIES REACTIVITY: Human. Reactivity with other species has not been determined.

FORMAT: Rabbit serum.

PRESENTATION: Liquid

STORAGE/HANDLING: Maintain at -20°C in undiluted aliquots for up to 6 months after date of receipt. Avoid repeated freeze/thaw cycles.

REFERENCE: Roelofs, RF, et al., Adult human subventricular, subgranular, and subpial zones contain astrocytes with a specialized intermediate filament cytoskeleton. *Glia* (2005) **52**:289-300.

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