Store at -20°C

Neuronal Marker IF Antibody Sampler Kit II

#24544

Support: +1-978-867-2388 (U.S.)
www.cellsignal.com/support

Orders: 877-616-2355 (U.S.)
orders@cellsignal.com

New 04/18

Entrez-Gene ID #1641, 2670, 4288, 4155, 4440, 146713
UniProt ID #O43602, P14136, P46013, P02686, O43347, A6NFN3

For Research Use Only. Not For Use In Diagnostic Procedures.

Products Included	Product #	Quantity	Mol. Wt.	Isotype/Source
Doublecortin (A8L1U) Rabbit mAb	14802	20 µl	45 kDa	Rabbit IgG
NeuN (D4G40) XP® Rabbit mAb	24307	20 µl	46-55 kDa	Rabbit IgG
GFAP (GA5) Mouse mAb	3670	20 µl	50 kDa	Mouse IgG1
Myelin Basic Protein (D8X4Q) XP® Rabbit mAb	78896	20 µl	12-18 kDa	Rabbit IgG
Ki-67 (D3B5) Rabbit mAb	9129	20 µl	359 kDa	Rabbit IgG

Description: The Neuronal Marker IF Antibody Sampler Kit II provides an economical means for labeling cell types and cell structures by immunofluorescence (IF-F).

Background: The antibodies in this kit serve as markers to determine cell types in the brain. Doublecortin is a microtubule associated protein that stabilizes and bundles microtubules. Doublecortin is expressed in neuronal precursor cells and expression is downregulated as neurons mature (1). Neuronal nuclei (NeuN, Fox-3, RBFOX3) is a nuclear protein expressed in most post-mitotic neurons of the central and peripheral nervous systems. NeuN is not detected in Purkinje cells, sympathetic ganglion cells, Cajal-Retzius cells, INL retinal cells, inferior olivary, or dentate nucleus neurons (2). As Doublecortin is downregulated, NeuN is upregulated (1,2). GFAP filaments are characteristic of differentiated and mature brain astrocytes. In addition, GFAP is commonly used by investigators as a marker for intracranial and intraspinal tumors arising from astrocytes (3). Myelin basic protein (MBP) is an abundant central nervous system (CNS) myelin membrane protein that plays an important role in nerve myelination. Myelin sheaths are multi-layered membranes derived from oligodendrocytes (4). Ki-67 is universally expressed among proliferating cells and absent in quiescent cells. Specifically, it is detected in proliferating cells in G1, S, G2, and mitosis, but not in the G0 resting phase (5).

Background References:

(1) Brown, J.P. et al. (2003) *J Comp Neurol* 467, 1-10.

(2) Mullen, R.J. et al. (1992) *Development* 116, 201-11.

(3) Goebel, H.H. et al. (1987) *Acta Histochem Suppl* 34, 81-93.

(4) Harauz, G. and Boggs, J.M. (2013) *J Neurochem* 125, 334-61.

(5) Gerdes, J. et al. (1983) *Int J Cancer* 31, 13-20.

Storage: Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at –20°C. *Do not aliquot the antibody.*

For product specific protocols and a complete listing of recommended companion products please see the product web page at www.cellsignal.com

Specificity/Sensitivity: Each antibody in the Neuronal Marker IF Antibody Sampler Kit II has been validated for IF-F, recognizes only its specific target, and does not cross-react with other family members. Doublecortin (A8L1U) Rabbit mAb recognizes endogenous levels of total doublecortin protein. NeuN (D4G40) XP® Rabbit mAb recognizes endogenous levels of total NeuN protein. GFAP (GA5) Mouse mAb detects endogenous levels of total GFAP protein. Myelin Basic Protein (D8X4Q) XP® Rabbit mAb recognizes endogenous levels of total myelin basic protein. Ki-67 (D3B5) Rabbit mAb recognizes endogenous levels of total Ki-67 protein.

Source/Purification: Rabbit and Mouse monoclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to residues near the carboxy terminus of human doublecortin protein, or with recombinant protein specific to the amino terminus of human NeuN protein, or with native GFAP purified from pig spinal cord, or with a synthetic peptide corresponding to residues surrounding Ala185 of human myelin basic protein, or with a synthetic peptide corresponding to residues near the amino terminus of human Ki-67 protein.

Thank you for your recent purchase. If you would like to provide a review visit cellsignal.com/comments.

www.cellsignal.com

Applications: **W**—Western **IP**—Immunoprecipitation **IHC**—Immunohistochemistry **ChIP**—Chromatin Immunoprecipitation **IF**—Immunofluorescence **F**—Flow cytometry **E-P**—ELISA-Peptide **Species Cross-Reactivity:** **H**—human **M**—mouse **R**—rat **Hm**—hamster **Mk**—monkey **Mi**—mink **C**—chicken **Dm**—D. melanogaster **X**—Xenopus **Z**—zebrafish **B**—bovine **Dg**—dog **Pg**—pig **Sc**—S. cerevisiae **Ce**—C. elegans **Hr**—Horse **All**—all species expected Species enclosed in parentheses are predicted to react based on 100% homology.