

Microglia Proliferation Module Antibody Sampler Kit



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1 Kit (7 x 20 microliters)

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For Research Use Only. Not for Use in Diagnostic Procedures.

Product Includes	Product #	Quantity	Mol. Wt	Isotype/Source
HS1 (D5A9) XP® Rabbit mAb	3892	20 µl	80 kDa	Rabbit IgG
ASC/TMS1 (D2W8U) Rabbit mAb	67824	20 µl	22 kDa	Rabbit IgG
Ki-67 (D3B5) Rabbit mAb	9129	20 µl		Rabbit IgG
MCM2 (D7G11) XP® Rabbit mAb	3619	20 µl	125 kDa	Rabbit IgG
Survivin (71G4B7) Rabbit mAb	2808	20 µl	16 kDa	Rabbit IgG
HP1α/β (C7F11) Rabbit mAb	2623	20 µl	25 kDa	Rabbit IgG
Phospho-Aurora A (Thr288)/Aurora B (Thr232)/Aurora C (Thr198) (D13A11) XP® Rabbit mAb	2914	20 µl	35, 40, 48 kDa	Rabbit IgG
Anti-rabbit IgG, HRP-linked Antibody	7074	100 µl		Goat

Please visit cellsignal.com for individual component applications, species cross-reactivity, dilutions, protocols, and additional product information.

Description

The Microglia Proliferation Module Antibody Sampler Kit provides an economical means of detecting proteins identified as markers of microglial proliferation by western blot and/or immunofluorescence.

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.

Background

Distinct microglial activation states have been identified using RNA-seq data from a vast array of neurological disease and aging models. These activation states have been categorized into modules corresponding to proliferation, neurodegeneration, interferon-relation, LPS-relation, and many others (1). Previous work identifying markers of specific brain cell types using RNA-seq has shown HS1 and ASC/TMS1 to be useful and specific tools to study microglia (2). HS1 is a protein kinase substrate that is expressed only in tissues and cells of hematopoietic origin (3) and ASC/TMS1 has been found to be a critical component of inflammatory signaling where it associates with and activates caspase-1 in response to pro-inflammatory signals (4). Ki-67 is a nuclear nonhistone protein (5) universally expressed among proliferating cells and absent in quiescent cells (6). Minichromosome maintenance protein 2 (MCM2) is a nuclear protein that plays a role in DNA replication and cell division (7) and is commonly used as a marker for cell proliferation, including brain tissue (8). Survivin binds and inhibits caspase-3, controlling the checkpoint in the G2/M-phase of the cell cycle by inhibiting apoptosis and promoting cell division (9). Aurora A, B, and C are a family of highly conserved serine/threonine kinases that regulate chromosomal alignment and segregation during mitosis and meiosis. Their activity requires autophosphorylation of a threonine within their kinase domain at site Thr288 of Aurora A, Thr232 of Aurora B, and Thr198 of Aurora C (10). Heterochromatin protein 1 (HP1) α and β are heterochromatic adaptor molecules involved in both gene silencing and higher order chromatin structure (11).

Background References

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