SYSY Synaptic Systems

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Vimentin

Cat.No. 172 002; Polyclonal rabbit antibody, 200 µl antiserum (lyophilized)

Data Sheet

Reconstitution/ Storage	200 μl antiserum, lyophilized. For reconstitution add 200 μl $H_2O,$ then aliquot and store at -20°C until use.
Applications	WB: 1 : 1000 (AP staining) IP: not tested yet ICC: 1 : 500 IHC: 1 : 200 up to 1 : 500 IHC-P/FFPE: 1 : 500 EM: yes
Immunogen	Recombinant protein corresponding to AA 1 to 466 from mouse Vimentin (UniProt Id: P20152)
Reactivity	Reacts with: human (P08670), rat (P31000), mouse (P20152), monkey. No signal: zebrafish. Other species not tested yet.
Specificity	Specific for vimentin. (K.O. verified)

TO BE USED IN VITRO / FOR RESEARCH ONLY NOT TOXIC, NOT HAZARDOUS, NOT INFECTIOUS, NOT CONTAGIOUS

Vimentin belongs to the family of intermediate filaments that can be subdivided into six major groups based on sequence similarity. Vimentin belongs to the type III category and is the predominant subunit protein of intermediate filaments in tissues of mesenchymal origin.

Like other intermediate filaments it plays a role in the cytoskeletal organization and maintenance of cell shape and morphology.

Selected References SYSY Antibodies

Release of astroglial vimentin by extracellular vesicles: Modulation of binding and internalization of C3 transferase in astrocytes and neurons

Adolf A, Rohrbeck A, Münster-Wandowski A, Johansson M, Kuhn HG, Kopp MA, Brommer B, Schwab JM, Just I, Ahnert-Hilger G, Höltje M, et al.

Glia (2018) : . WB, ICC, IHC, EM; KO verified

The intermediate filament protein vimentin is essential for axonotrophic effects of Clostridium botulinum C3 exoenzyme. Adolf A, Leondaritis G, Rohrbeck A, Eickholt BJ, Just I, Ahnert-Hilger G, Höltje M Journal of neurochemistry (2016) 139(2): 234-244. IHC, WB; KO verified

Tanycytes and a differential fatty acid metabolism in the hypothalamus. Hofmann K, Lamberz C, Piotrowitz K, Offermann N, But D, Scheller A, Al-Amoudi A, Kuerschner L Glia (2017) 65(2): 231-249. IHC: tested species: mouse

A novel method for culturing stellate astrocytes reveals spatially distinct Ca2+ signaling and vesicle recycling in astrocytic processes.

Wolfes AC, Ahmed S, Awasthi A, Stahlberg MA, Rajput A, Magruder DS, Bonn S, Dean C The Journal of general physiology (2017) 149(1): 149-170. WB

KCa3.1 channels modulate the processing of noxious chemical stimuli in mice. Lu R, Flauaus C, Kennel L, Petersen J, Drees O, Kallenborn-Gerhardt W, Ruth P, Lukowski R, Schmidtko A Neuropharmacology (2017) 125: 386-395. IHC; tested species: mouse

NDRG2 as a marker protein for brain astrocytes. Flügge G, Araya-Callis C, Garea-Rodriguez E, Stadelmann-Nessler C, Fuchs E Cell and tissue research (2014) 357(1): 31-41. IHC; tested species: marmoset

Age-related brain pathology in Octodon degu: blood vessel, white matter and Alzheimer-like pathology. van Groen T, Kadish I, Popović N, Popović M, Caballero-Bleda M, Baño-Otálora B, Vivanco P, Rol MÁ, Madrid JA Neurobiology of aging (2011) 32(9): 1651-61. IHC

Activity-dependent regulation of MHC class I expression in the developing primary visual cortex of the common marmoset monkey.

Ribic A, Flügge G, Schlumbohm C, Mätz-Rensing K, Walter L, Fuchs E Behavioral and brain functions : BBF (2011) 7: 1. IHC

Selected General References

Architecture of the vimentin cytoskeleton is modified by perturbation of the GTPase ARF1. Stvers ML. Kowalczyk AP. Faundez V Journal of cell science (2006) 119(Pt 17): 3643-54.

A direct interaction between actin and vimentin filaments mediated by the tail domain of vimentin. Esue O, Carson AA, Tseng Y, Wirtz D The Journal of biological chemistry (2006) 281(41): 30393-9.

Ultrastructure of intermediate filaments of nestin- and vimentin-immunoreactive astrocytes in organotypic slice cultures of hippocampus. Miyaguchi K Journal of structural biology (1997) 120(1): 61-8.

The cytoskeleton of primary astrocytes in culture contains actin, glial fibrillary acidic protein, and the fibroblast-type filament protein, vimentin. Chiu FC, Norton WT, Fields KL Journal of neurochemistry (1981) 37(1): 147-55.

Vimentin: a phosphoprotein under hormonal regulation. Browning ET, Sanders MM The Journal of cell biology (1981) 90(3): 803-8.

The synthesis and distribution of desmin and vimentin during myogenesis in vitro. Gard DL, Lazarides E Cell (1980) 19(1): 263-75.