

## GAPDH

Cat.No. 247 002; Polyclonal rabbit antibody, 200 µl antiserum (lyophilized)

### Data Sheet

Reconstitution/ Storage	200 µl antiserum, lyophilized. For reconstitution add 200 µl H <sub>2</sub> O, then aliquot and store at -20°C until use.
Applications	<b>WB:</b> 1 : 1000 up to 1 : 5000 (AP staining) <b>IP:</b> not tested yet <b>ICC:</b> not tested yet <b>IHC:</b> not tested yet <b>IHC-P/FFPE:</b> not tested yet
Immunogen	Recombinant protein corresponding to AA 1 to 335 from human GAPDH (UniProt Id: P04406)
Reactivity	Reacts with: human (P04406), rat (P04797), mouse (P16858), zebrafish. Other species not tested yet.
Specificity	Specific for GAPDH.
Remarks	Well established as a loading control for Western-blotting.

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

Glyceraldehyde 3-phosphate dehydrogenase (**GAPDH**), also referred to as G3PDH, catalyzes the sixth step of glycolysis and thus plays a crucial role in the glucose metabolism. In addition to this well known metabolic function it also exhibits nitrosylase activities and is involved in cellular events like transcription, RNA transport, DNA replication and apoptosis. It is an abundant housekeeping gene and is frequently used as a loading reference in westernblot experiments.

### Selected References SYSY Antibodies

Interactome of the amyloid precursor protein APP in brain reveals a protein network involved in synaptic vesicle turnover and a close association with Synaptotagmin-1.

Kohli BM, Pflieger D, Mueller LN, Carbonetti G, Aebersold R, Nitsch RM, Konietzko U  
Journal of proteome research (2012) 11(8): 4075-90. **WB**

Inhibition of TNF-α-induced neuronal apoptosis by antidepressants acting through the lysophosphatidic acid receptor LPA1.

Olianas MC, Dedoni S, Onali P

Apoptosis : an international journal on programmed cell death (2019) : . **WB; tested species: mouse**

Overexpression of SNX7 reduces Aβ production by enhancing lysosomal degradation of APP.

Xu S, Zhang L, Brodin L

Biochemical and biophysical research communications (2018) 495(1): 12-19. **WB; tested species: human**

The Microglial Innate Immune Receptor TREM2 Is Required for Synapse Elimination and Normal Brain Connectivity.

Filipello F, Morini R, Corradini I, Zerbi V, Canzi A, Michalski B, Erreni M, Markicevic M, Starvaggi-Cucuzza C, Otero K, Piccio L, et al.  
Immunity (2018) : . **WB; tested species: mouse**

Pentraxin 3 regulates synaptic function by inducing AMPA receptor clustering via ECM remodeling and β1-integrin.

Fossati G, Pozzi D, Canzi A, Mirabella F, Valentino S, Morini R, Ghirardini E, Filipello F, Moretti M, Gotti C, Annis DS, et al.

The EMBO journal (2018) : . **WB; tested species: mouse**

The GABAB positive allosteric modulators CGP7930 and GS39783 stimulate ERK1/2 signalling in cells lacking functional GABAB receptors.

Olianas MC, Dedoni S, Onali P

European journal of pharmacology (2017) 794: 135-146. **WB**

Muscarinic Acetylcholine Receptors Potentiate 5'-Adenosine Monophosphate-Activated Protein Kinase Stimulation and Glucose Uptake Triggered by Thapsigargin-Induced Store-Operated Ca<sup>2+</sup> Entry in Human Neuroblastoma Cells.

Olianas MC, Dedoni S, Onali P

Neurochemical research (2017) : . **WB; tested species: human**

Novel axon projection after stress and degeneration in the Dscam mutant retina.

Fernandes KA, Bloomsburg SJ, Miller CJ, Billingslea SA, Merrill MM, Burgess RW, Libby RT, Fuerst PG

Molecular and cellular neurosciences (2016) 71: 1-12. **WB**

Protective properties of lysozyme on β-amyloid pathology: implications for Alzheimer disease.

Helmfors L, Boman A, Civitelli L, Nath S, Sandin L, Janefjord C, McCann H, Zetterberg H, Blennow K, Halliday G, Brorsson AC, et al.

Neurobiology of disease (2015) 83: 122-33. **WB**

REST-Governed Gene Expression Profiling in a Neuronal Cell Model Reveals Novel Direct and Indirect Processes of Repression and Up-Regulation.

Garcia-Manteiga JM, Bonfiglio S, Folladori L, Malosio ML, Lazarevic D, Stupka E, Cittaro D, Meldolesi J

Frontiers in cellular neuroscience (2015) 9: 438. **WB**

Type I interferons up-regulate the expression and signalling of p75 NTR/TrkA receptor complex in differentiated human SH-SY5Y neuroblastoma cells.

Dedoni S, Olianas MC, Ingianni A, Onali P

Neuropharmacology (2014) 79: 321-34. **WB; tested species: human**

Growth differentiation factor 5 is a key physiological regulator of dendrite growth during development.

Osório C, Chacón PJ, Kisiswa L, White M, Wyatt S, Rodríguez-Tébar A, Davies AM

Development (Cambridge, England) (2013) 140(23): 4751-62. **WB; tested species: mouse**

### Selected General References

Regulation of oncogenic transcription factor hTAF(II)68-TEC activity by human glyceraldehyde-3-phosphate dehydrogenase (GAPDH).

Kim S, Lee J, Kim J

The Biochemical journal (2007) 404(2): 197-206.

GAPDH as a housekeeping gene: analysis of GAPDH mRNA expression in a panel of 72 human tissues.

Barber RD, Harmer DW, Coleman RA, Clark BJ

Physiological genomics (2005) 21(3): 389-95.

S-nitrosylated GAPDH initiates apoptotic cell death by nuclear translocation following Siah1 binding.

Hara MR, Agrawal N, Kim SF, Cascio MB, Fujimuro M, Ozeki Y, Takahashi M, Cheah JH, Tankou SK, Hester LD, Ferris CD, et al.

Nature cell biology (2005) 7(7): 665-74.

Multiple insulin-responsive elements regulate transcription of the GAPDH gene.

Alexander-Bridges M, Dugast I, Ercolani L, Kong XF, Giere L, Nasrin N

Advances in enzyme regulation (1992) 32: 149-59.