Product datasheet

anti-Synaptophysin mouse monoclonal, SY38, liquid, purified

Short overview

Cat. No.	690012
Quantity	1 ml
Concentration	50 µg/ml (50 µg)

Product description

Host	Mouse
Antibody Type	Monoclonal
Isotype	IgG1
Clone	SY38
Immunogen	Synaptophysin from presynaptic vesicles, prepared from bovine brain
Formulation	PBS pH 7.4 with 0.09% sodium azide and 0.5% BSA
UniprotID	P20488 (Bovine), P08247 (Human), Q62277 (Mouse), P07825 (Rat)
Synomym	Synaptophysin, Major synaptic vesicle protein p38, SYP
Conjugate	Unconjugated
Purification	Affinity chromatography
Storage	Short term at 2-8°C; long term storage in aliquots at -20°C; avoid freeze/thaw cycles
Intended use	Research use only
Application	ICC/IF, IHC, WB
Reactivity	Bovine, Human, Mouse, Rat

Applications

Immunocytochemistry (ICC)	Assay dependent
Immunohistochemistry (IHC) - frozen	1:50-1:200 (0.25-1 µg/ml, no protease treatment)
Immunohistochemistry (IHC) - paraffin	1:50-1:200 (0.25-1 µg/ml, microwave treatment recommended, no protease treatment)
Western Blot (WB)	1:500-1:1,000 (0.05-0.1 µg/ml)

Background

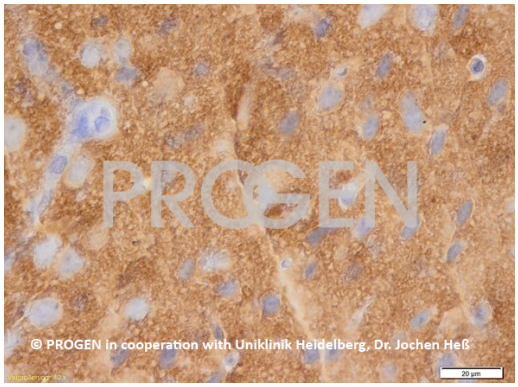
SY38 represents an excellent marker for several neuroendocrine, neuronal and adrenal tumors. Neuronal and adrenal tumors such as pheochromocytomas, paragangliomas, neuroblastomas, ganglioneuroblastomas. Neuroendocrine tumors of epithelial origin: Pancreatic islet cell carcinoma, bronchial and gastrointestinal carcinoids, medullary carcinoma of thyroid. Polypeptide reacting: 38 kDa transmembrane glycoprotein of presynaptic vesicles.

SY38 binds to a cytoplasmatic domain of synaptophysin. The epitope was located to a flexible segment in the center of the repeat structure (Knaus and Betz, 1990).

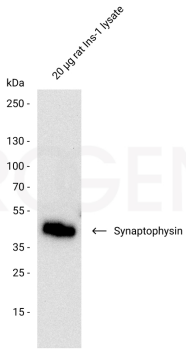
Tested cultured cell lines: rat PC-12 cell line.

Knaus, P. & Betz, H. Mapping of a dominant immunogenic region of synaptophysin, a major membrane protein of synaptic vesicles. FEBS Lett. 261, 358360 (1990).

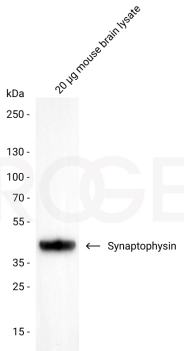
Product images



Mouse brain (courtesy of J. Heß, University Hospital Heidelberg)



Western blot analysis of rat Ins-1 lysate with anti-Synaptophysin antibody. Western blot analysis was performed on 20 µg rat Ins-1 lysate. The PVDF membrane was blocked with 5% dry milk in PBST (PBS + 0.1% Tween 20) for 1 h at RT. The primary antibody anti-Synaptophysin mouse monoclonal, SY38 (Cat. No. 690012) was diluted in blocking buffer (antibody concentration 0.1 µg/ml) and incubated for 1 h at RT. The secondary antibody anti-mouse, HRP conjugate was also diluted in blocking buffer (antibody concentration 0.2 µg/ml) and incubated for 1 h at RT. The bands were visualized by chemiluminescent detection using PierceTM ECL Western Blotting Substrate.



Western blot analysis of mouse brain lysate with anti-Synaptophysin antibody. Western blot analysis was performed on 20 µg mouse brain lysate. The PVDF membrane was blocked with 5% dry milk in PBST (PBS + 0.1% Tween 20) for 1 h at RT. The primary antibody anti-Synaptophysin mouse monoclonal, SY38 (Cat. No. 690012) was diluted in blocking buffer (antibody concentration 0.05 µg/ml) and incubated for 1 h at RT. The secondary antibody anti-mouse, HRP conjugate was also diluted in blocking buffer (antibody concentration 0.2 µg/ml) and incubated for 1 h at RT. The bands were visualized by chemiluminescent detection using PierceTM ECL Western Blotting Substrate.

References

Publication	Species	Application
Matsuda, T and Oinuma, . Imaging endogenous synaptic proteins in primary neurons at single-cell resolution using CRISPR/Cas9. Mol.Biol.Cell. 30, 2838-2855 (2019)	mouse	ICC-IF
Noble, E. et al. Control of Feeding Behavior by Cerebral Ventricular Volume Transmission of Melanin-Concentrating Hormone. Cell.Metab. 28, 55-68.e7 (2018)	rat	IHC-IF (paraffin)
Hsu, T. M. et al. Hippocampus ghrelin signaling mediates appetite through lateral hypothalamic orexin pathways. Elife 4, (2016).	rat	IHC (frozen)
Nakajima, C. et al. Low Density Lipoprotein Receptor-related Protein 1 (LRP1) Modulates N-Methyl-D-aspartate (NMDA) Receptor-dependent Intracellular Signaling and NMDA-induced Regulation of Postsynaptic Protein Complexes. J. Biol. Chem. 288, 21909-21923	mouse	WB,ICC-IF
Sato, J., Sasaki, S., Yamada, N. & Tsuchitani, M. Hereditary Cerebellar Degenerative Disease (Cerebellar Cortical Abiotrophy) in Rabbits. Vet. Pathol. 49, 621-628 (2012).	rabbit	IHC (paraffin)