Product datasheet

anti-Synaptophysin mouse monoclonal, SY38, lyophilized, purified

Short overview

Cat. No.	61012
Quantity	50 µg
Concentration	50 µg/ml after reconstitution with 1 ml dist. water

Product description

Host	Mouse
Antibody Type	Monoclonal
Isotype	IgG1
Clone	SY38
Immunogen	Synaptophysin from presynaptic vesicles, prepared from bovine brain
Formulation	Lyophilized; reconstitute in 1 ml dist. water (final solution contains 0.09% sodium azide, 0.5% BSA in PBS buffer, pH 7.4)
UniprotID	P20488 (Bovine), P08247 (Human), Q62277 (Mouse), P07825 (Rat)
Synomym	Synaptophysin, Major synaptic vesicle protein p38, SYP
Conjugate	Unconjugated
Purification	Affinity chromatography
Storage before reconstitution	2-8°C until indicated expiry date
Storage after reconstitution	Up to 3 months 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	At least 1:50 with PBS, pH 7.4 (no protease treatment)
Immunohistochemistry (IHC) - paraffin	At least 1:50 with PBS, pH 7.4 (microwave treatment recommended, no protease treatment)
Western Blot (WB)	1:500-1:1,000 (0.05-0.1 µg/ml)

Background

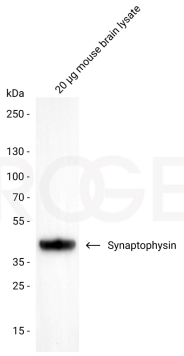
SY38 represents an excellent marker for several neuroendocrine, neuronal and adrenal tumors. Neuronal and adrenal tumors such as pheochromocytomas, paragangliomas, neuroblastomas, ganglioneuroblastomas. Neuroendocrine tumors of epithelial origin: Pancreatic islet cell carcinoma, bronchial and gastrointestinal 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).

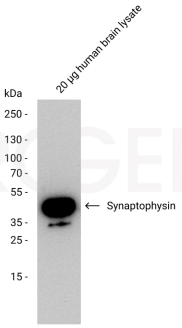
Tested cultured cell lines: rat PC-12 cell line.

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

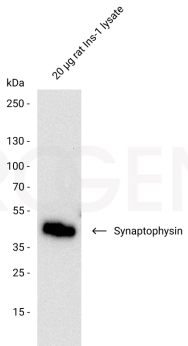
Product images



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.



Western blot analysis of human brain lysate with anti-Synaptophysin antibody. Western blot analysis was performed on 20 µg human 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.



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.

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)