Product datasheet

anti-Synaptopodin/SYNPO (N-terminus) guinea pig polyclonal, serum

Short overview

Cat. No.	GP94-N
Quantity	100 µl

Product description

Host	Guinea pig
Antibody Type	Polyclonal
Immunogen	Synthetic peptides (mouse N-terminus), coupled to KLH
Formulation	Contains 0.09% sodium azide and 0.5% BSA
UniprotID	Q8N3V7 (Human),Q91YE8 (Mouse)
Synomym	Synaptopodin, SYNPO, KIAA1029
Note	Centrifuge prior to opening
Conjugate	Unconjugated
Purification	Stabilized antiserum
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	Human, Mouse

Applications

Immunocytochemistry (ICC)	Assay dependent
Immunohistochemistry (IHC) - frozen	1:50-1:100
Immunohistochemistry (IHC) - paraffin	1:50-1:100 (microwave treatment recommended)
Western Blot (WB)	1:500-1:1,000

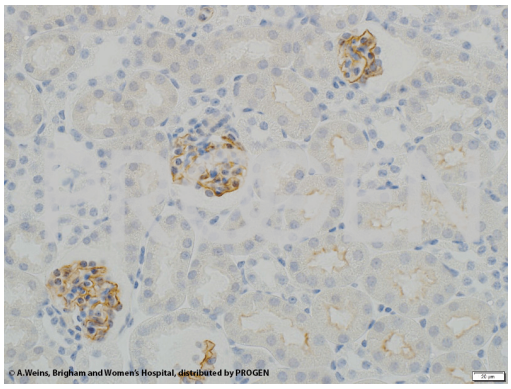
Background

The antibody reacts specifically with the N-terminus of synaptopodin/SYNPO, a prolin-rich actin-binding protein with 2 binding sites for actin. Synaptopodin belongs to actin-binding pro-teins, it has first been localized in podocytes and a subset of telencephalic postsynaptic densities. In human tissue synaptopodin has a molecular weight of 73.7 kD and pI of 9.38 (calculated from sequence data); in mouse the corre-sponding data are 74 kD, pI 9.27. In SDS-PAGE the antigen appears as 100 kD polypeptide in brain and 110 kD polypeptide in kidney (attributed to posttransla-tional modifications). In Western blot analysis the antibody also reacts with a 44 kD degradation fragment of synaptopodin.

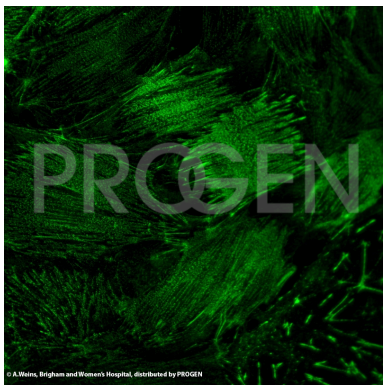
The antibody recognizes differentiated podocytes (glomerular visceral epithelial cells) in vivo and in vitro (weaker additional reaction with arterial endothelial cells), co-localization with alpha-actinin.

Reacts with a subset of exclusively telencephalic synapses. Differentiation-dependent expression during postnatal maturation of murine brain. Differentiation-dependent expression in cultured hippocampal neurons.

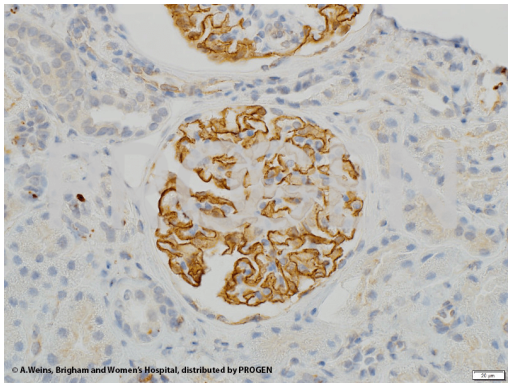
Product images



Synaptopodin staining in human glomeruli (GP94-N; dilution 1:100; Image courtesy of A.Weins, Brigham and Women's Hospital)



Synaptopodin immunoflurescence staining in human podocytes. (Image courtesy of A.Weins, Brigham and Women's Hospital)



Synaptopodin staining in human glomeruli (GP94-N; dilution 1:50; Image courtesy of A.Weins, Brigham and Women's Hospital)

References

Publication	Species	Application
Westerling-Bui, A. D. et al. Transplanted organoids empower human preclinical assessment of drug candidate for the clinic., Sci Adv 8, eabj5633, (2022).	rat	IHC-IF
Li, L. et al. PGC1Î± is required for the renoprotective effect of lncRNA Tug1 inÂ vivo and links Tug1 with urea cycle metabolites. Cell Rep. 36, 109510(2021).	mouse	IHC (paraffin)/IF