www.phosphosolutions.com
orders@phosphosolutions.com
888-442-7100

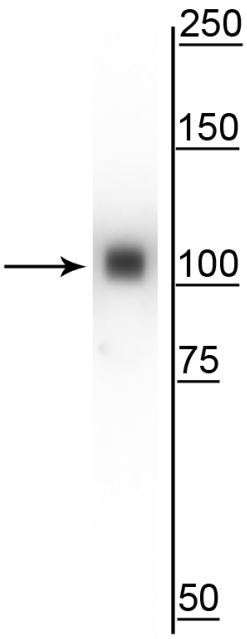
Product Datasheet

Anti-Alpha Actinin 4

Overview

Catalog #	127-ACTN4
Host Species	Mouse Monoclonal
Isotype	IgG
Clone	93
Format	Protein G purified
Applications	WB 1:1000 IHC 1:250
Species Tested	Human, Mouse
Immunogen	Fusion protein from the central rod domain of human α-actinin 4.
Molecular Weight	105 kDa
Cite this Antibody	PhosphoSolutions Cat# 127-ACTN4, RRID:AB_2736847

Images



Western blot of mouse whole brain lysate showing specific immunolabeling of the ~105 kDa α-actinin 4 protein.

Details

Target Description	α-actinin-4 is a member of the actinin protein family comprised of an actin-binding domain in the N-terminus, 4 spectrin-like repeats in the central region, and 2 EF-hand motifs in the C-terminus (Honda et al, 1998). α-actinin-4 and CLP36 form a complex in normal kidney podocytes.CLP36 is dependent on α-actinin-4 for maintenance of its level in podocytes, whereas α-actinin-4 is independent of CLP36. α-actinin-4 is widely expressed in mammalian tissues and organs, while having a high occurrence of genetic mutations in kidney podocytes (Kos et al, 2003). FSGS, focal segmental glomerulosclerosis, is a rare genetic disease that attacks the kidney's filtering units (glomeruli) causing serious scarring which leads to permanent kidney damage and even failure. Three key mutations have been found in α-actinin-4 in people diagnosed with FSGS. R310Q and Q348R, located in the spectrin-like repeats region, and K255E located in the actin-binding region. The R310Q and Q348R mutation significantly inhibits the ability of α-actinin-4 to form the complex with CLP36. The K255E mutation was reversed where it increased the ability to bind CLP36 in the actin-binding region (Liu et al, 2011).
Specificity	Specific for endogenous levels of the ~105 kDa α-actinin 4 protein.
Production/Purification	Protein G purified cultured supernatant.
Quality Control	Western blots performed on each lot.
Buffer	10 mM HEPES (pH 7.5), 150 mM NaCl, 100 µg per ml BSA and 50% glycerol.
Storage	Storage at -20°C is recommended, as aliquots may be taken without freeze/thawing due to presence of 50% glycerol.
Stability	After date of receipt, stable for at least 1 year at -20°C.

Significant Citations

Liu, Z., Blattner, S.M., Tu, Y., Tisherman, R., Wang, J.H., Rastaldi, M.P., Kretzler, M. and Wu, C., 2011. α-Actinin-4 and CLP36 protein deficiencies contribute to podocyte defects in multiple human glomerulopathies. Journal of Biological Chemistry, 286(35), pp.30795-30805.

Our Guarantee

As an original manufacturer, we are dedicated to creating quality and reproducible antibodies that further your research. We provide personalized customer support from the scientists that made the antibody and offer a free replacement or 100% refund if we cannot resolve an issue. Order today and experience **Antibodies that Work™**.