Anti-Phospho-Ser^{940} Potassium Chloride Cotransporter (KCC2) Antibody

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Catalog #: p1551-940 **Size:** 100 µl

Cite this Antibody: PhosphoSolutions Cat# p1551-940, RRID:AB_2492213

Host	Applications	Species Tested	Species Reactivity*	Molecular Reference
Rabbit	WB 1:1000	R	B, C, H, M, NHP	~135 kDa

Product Description: Affinity purified rabbit polyclonal antibody.

Biological Significance: KCC2 is widely thought to be expressed exclusively in neurons where it is responsible for maintaining low intracellular chloride concentration to drive hyperpolarizing post-synaptic responses to the inhibitory neurotransmitters GABA and glycine. Serine^{940} on KCC2 has been shown to be phosphorylated by PKC and has further been demonstrated to be the major site for PKC-dependent phosphorylation for full length KCC2 molecules when expressed in HEK-293 cells as phosphorylation of Ser^{940} increased the cell surface stability of KCC2 in this system by decreasing it's rate of internalization from the plasma membrane (Lee et al., 2007).

Antigen: Phosphopeptide corresponding to amino acid residues surrounding the phospho-Ser^{940} of rat KCC2.

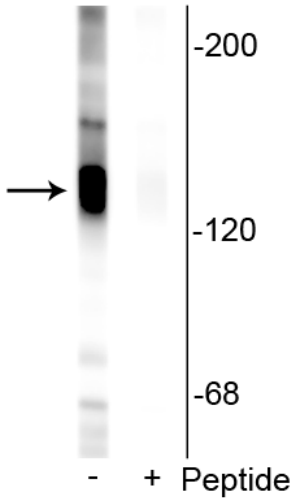
Antibody Specificity: Specific for endogenous levels of the ~135 kDa KCC2 protein phosphorylated at Ser^{940}. Immunolabeling is blocked by preadsorption with the phosphopeptide used as antigen, but not by the corresponding non-phosphopeptide.

Purification Method: Prepared from pooled rabbit serum by affinity purification via sequential chromatography on phospho and non-phosphopeptide affinity columns.

Quality Control Tests: Western blots performed on each lot.

Packaging: 100 µl in 10 mM HEPES (pH 7.5), 150 mM NaCl, 100 µg BSA per ml and 50% glycerol.

Storage and Stability: Shipped on blue ice. Storage at -20°C is recommended, as aliquots may be taken without freeze/thawing due to presence of 50% glycerol. Stable for at least 1 year at -20°C.



Western blot of rat hippocampal lysate showing specific labeling of the ~135 kDa KCC2 protein in the first lane (-). Immunolabeling is blocked by preadsorption with the phosphopeptide used as antigen in the second lane (+), but not by the corresponding non-phosphopeptide (not shown).

Application Key: **WB** = Western Blot **IF** = Immunofluorescence **IHC** = Immunohistochemistry **IP** = Immunoprecipitation
Species Reactivity Key: **All**-All Species **A**-Avian **Amp**-Amphibian **Ar**-*Arabidopsis* **B**-Bovine **C**-Canine **Ch**-Chicken **D**-*Drosophila* **GP**-Guinea Pig **H**-Human **Ha**-Hamster **M**-Mouse **NHP**- Non-human primate **P**-Pig **R**-Rat **S**-Sheep **X**-*Xenopus* **Z**-Zebrafish
*Species assumed based on 100% homology with sequence used as antigen **For Research Use Only**

Product Specific References:

Mekhael, W., Begum, S., Samaddar, S., Hassan, M., Toruno, P., Ahmed, M., Gorin, A., Maisano, M., Ayad, M. and Ahmed, Z., 2019. Repeated anodal trans-spinal direct current stimulation results in long-term reduction of spasticity in mice with spinal cord injury. *The Journal of physiology.*

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General References:

Lee HH, Walker JA, Williams JR, Goodier RJ, Payne JA, Moss SJ (2007) Direct protein kinase C-dependent phosphorylation regulates the cell surface stability and activity of the potassium chloride cotransporter KCC2. *J Biol Chem*. 2007 Oct 12; 282(41):29777-84.

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