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

**Catalog Number:** p1551-940  
**Size:** 100 µl

**Product Description:** Affinity purified rabbit polyclonal antibody

**Applications:**  
**WB:** 1:1000

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

**Species Reactivity:** The antibody has been directly tested for reactivity in Western blots with rat tissue. It is anticipated that the antibody will react with bovine, canine, human, mouse and non-human primate based on the fact that these species have 100% homology with the amino acid sequence used as antigen.

**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 Ser940 increased the cell surface stability of KCC2 in this system by decreasing its rate of internalization from the plasma membrane (Lee et al., 2007).

**Western blot** of rat hippocampal homogenate showing specific labeling of the ~ 135k KCC2 protein (Control). Immunolabeling is blocked by preadsorption with the phospho-peptide used as antigen (Peptide) but not by the corresponding dephospho-peptide (not shown).

**Packaging:** 100 µl in 10 mM HEPES (pH 7.5), 150 mM NaCl, 100 µg per ml BSA and 50% glycerol. Adequate amount of material to conduct 10-mini Western Blots.

**Storage and Stability:** For long term storage ~20°C is recommended. Stable at ~20°C for at least 1 year.

**Shipment:** Domestic - Blue Ice; International – Blue Ice or Dry Ice
Purification Method: Prepared from rabbit serum by affinity purification via sequential chromatography on phospho- and non-phosphopeptide affinity columns.

Antibody Specificity: Specific for the ~135k KCC2 protein phosphorylated at Ser^{940}. Immunolabeling of the KCC2 protein band is blocked by the phospho-peptide used as antigen but not by the corresponding dephosphopeptide.

Quality Control Tests: Western blots performed on each lot.

Product Specific References:


General References:


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