**BACKGROUND**

The four isoforms of potassium/chloride co-transport channels (KCC) belong to a superfamily of cation-chloride co-transporters involved in cell volume maintenance. Nitric oxide (NO) donors activate KCCs, while inhibitors of the cGMP pathway prevent NO donor activation. The ubiquitously expressed KCC1 contains 12 transmembrane domains with both cytoplasmic N- and C-terminal domains. KCC2 expression is limited to neuronal tissues by a restrictive element similar to the neuronal-restrictive silencing factor. In neurons, KCC2 expression is correlated with an inhibitory response to GABA, while the absence of KCC2 is necessary for an unusual excitatory response to GABA. Alterations of KCC2 expression in the inferior colliculus of rat brain may be related to seizure susceptibility. Conversely, KCC3 is not suspected to play a major role in epilepsy. The two splice variants of KCC3, KCC3α and KCC3β, are predominantly expressed in brain and kidney, respectively, while KCC4 is expressed in muscle, brain, lung, heart and kidney.

**REFERENCES**


**CHROMOSOMAL LOCATION**

Genetic locus: SLC12A5 (human) mapping to 20q13.12; Slc12a5 (mouse) mapping to 2 H3.

**SOURCE**

KCC2 (R-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of KCC2 of human origin.

**PRODUCT**

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-19420 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

**APPLICATIONS**

KCC2 (R-14) is recommended for detection of KCC2 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

KCC2 (R-14) is also recommended for detection of KCC2 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for KCC2 siRNA (h): sc-42606, KCC2 siRNA (m): sc-42607, KCC2 shRNA Plasmid (h): sc-42606-SH, KCC2 shRNA Plasmid (m): sc-42607-SH, KCC2 shRNA (h) Lentiviral Particles: sc-42606-V and KCC2 shRNA (m) Lentiviral Particles: sc-42607-V.

**DATA**

KCC2 (R-14): sc-19420. Immunoperoxidase staining of formalin fixed, paraffin-embedded human lymph node tissue showing cytoplasmic staining of cells in germinal and non-germinal centers.

**SELECT PRODUCT CITATIONS**


**STORAGE**

Store at 4°C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.