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[Marker Primary Antibody]

Rabbit Anti-KCC4/Biotin Conjugated antibody

Catalog Number: SL12170R-Bio

FOR RESEARCH USE ONLY

[DATASHEET]

Host:	Rabbit
Isotype:	IgG
Clonality:	Polyclonal
Target:	Anti-KCC4/Biotin
Immunogen:	KLH conjugated synthetic peptide derived from human KCC4
Purification:	affinity purified by Protein A
Concentration:	1mg/ml
Storage:	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. The lyophilized antibody is stable at room temperature for at least one month and for greater than a year when kept at -20°C. When reconstituted in sterile pH 7.4 1M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.
Applications:	WB=1:500-2000 not yet tested in other applications. optimal dilutions/concentrations should be determined by the end user.
Reactivity:	Mouse(predicted:Human,Rat,Pig,Horse)
Background:	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, KCC3a and KCC3b, are predominantly expressed in brain and kidney, respectively, while KCC4 is expressed in muscle, brain,

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	lung, heart and kidney. **Function:** Mediates electroneutral potassium-chloride cotransport when activated by cell swelling. May mediate K(+) uptake into Deiters' cells in the cochlea and contribute to K(+) recycling in the inner ear. Important for the survival of cochlear outer and inner hair cells and the maintenance of the organ of Corti. May be required for basolateral Cl(-) extrusion in the kidney and contribute to renal acidification. **Subcellular Location:** Membrane; Multi-pass membrane protein. **Tissue Specificity:** Detected in muscle, brain, lung, heart and kidney. **Similarity:** Belongs to the SLC12A transporter family. **Database links:** **Entrez Gene:** 10723 Human **Entrez Gene:** 20499 Mouse **Entrez Gene:** 308069 Rat Omim: 604879 Human **SwissProt:** Q9Y666 Human **SwissProt:** Q9WVL3 Mouse **SwissProt:** Q5RK27 Rat **Unigene:** 172613 Human **Unigene:** 275800 Mouse **Unigene:** 64199 Rat Important **Note:** This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.