

## CLC-2 (C-20): sc-16430

### BACKGROUND

The family of voltage-dependent chloride channels (CLCs) regulate cellular trafficking of chloride ions, a critical component of all living cells. CLCs regulate excitability in muscle and nerve cells, aid in organic solute transport and maintain cellular volume. The genes encoding human CLC-1 through CLC-7 map to chromosomes 7, 3q27.1, 4q32, Xp22, Xp11, 1p36 and 16p13, respectively. CLC-1 is highly expressed in skeletal muscle. Mutations in the gene encoding CLC-1 lead to myotonia, an inheritable disorder characterized by muscle stiffness and renal salt wasting. CLC-2 is highly expressed in the epithelia of several organs including lung, which suggests CLC-2 may be a possible therapeutic target for cystic fibrosis. CLC-3 expression is particularly abundant in neuronal tissue, while CLC-4 expression is evident in skeletal and cardiac muscle as well as brain. Mutations in the gene encoding CLC-5 lead to Dent's disease, a renal disorder characterized by proteinuria and hypercalciuria. CLC-6 and CLC-7 are broadly expressed in several tissues including testes, kidney, brain and muscle.

### CHROMOSOMAL LOCATION

Genetic locus: CLCN2 (human) mapping to 3q27.1; Clcn2 (mouse) mapping to 16 B1.

### SOURCE

CLC-2 (C-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of CLC-2 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-16430 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

### APPLICATIONS

CLC-2 (C-20) is recommended for detection of CLC-2 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

CLC-2 (C-20) is also recommended for detection of CLC-2 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for CLC-2 siRNA (h): sc-42379, CLC-2 siRNA (m): sc-42380, CLC-2 siRNA (r): sc-61868, CLC-2 shRNA Plasmid (h): sc-42379-SH, CLC-2 shRNA Plasmid (m): sc-42380-SH, CLC-2 shRNA Plasmid (r): sc-61868-SH, CLC-2 shRNA (h) Lentiviral Particles: sc-42379-V, CLC-2 shRNA (m) Lentiviral Particles: sc-42380-V and CLC-2 shRNA (r) Lentiviral Particles: sc-61868-V.

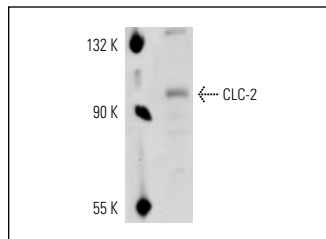
Molecular Weight of CLC-2: 98 kDa.

Positive Controls: mouse heart extract: sc-2254 or HeLa nuclear extract: sc-2120.

### STORAGE

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

### DATA



CLC-2 (C-20): sc-16430. Western blot analysis of CLC-2 expression in mouse heart tissue extract.

### SELECT PRODUCT CITATIONS

1. Pena-Munzenmayer, G., et al. 2005. Basolateral localization of native CLC-2 chloride channels in absorptive intestinal epithelial cells and basolateral sorting encoded by a CBS-2 domain di-leucine motif. *J. Cell Sci.* 118: 4243-4252.
2. Lan, W.Z., et al. 2005. Contribution of a time-dependent and hyperpolarization-activated chloride conductance to currents of resting and hypotonically shocked rat hepatocytes. *Am. J. Physiol. Gastrointest. Liver Physiol.* 288: G221-G229.
3. Cao, L., et al. 2010. Chloride channels and transporters in human corneal epithelium. *Exp. Eye Res.* 90: 771-779.
4. Vieira, A.C., et al. 2011. Ionic components of electric current at rat corneal wounds. *PLoS ONE* 6: e17411.

### RESEARCH USE

For research use only, not for use in diagnostic procedures.

### PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.

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Try **CLC-2 (D-6): sc-377284** or **CLC-2 (YY9): sc-81871**, our highly recommended monoclonal alternatives to CLC-2 (C-20).