

## SUR-1 (C-16): sc-5789

### BACKGROUND

Both sulphonylurea receptor-1 (SUR-1) and sulphonylurea receptor-2 (SUR-2) belong to the ATP-binding cassette superfamily associated with KIR6.x. SUR-1 and KIR6.x proteins are required for the regulation of glucose-induced Insulin secretion by controlling K-ATP channel activity of the pancreatic  $\beta$ -cell membrane while SUR-2 and KIR6.x proteins reconstitute the cardiac and the vascular-smooth-muscle-type K-ATP channels. Loss-of-function mutations in the SUR-1 gene causes the disease persistent hyperinsulinemic hypoglycemia of infancy (PHHI). PHHI is characterized by increased irregular Insulin secretion, which causes disorganized formation of new islets and leads to hypoglycemia, coma and severe brain damage. The K-ATP channels controlled by SUR-2 are activated during myocardial ischemia, which suggests that mutations in the SUR-2 gene may cause channel malfunction and ischemic injury to the heart. No disease has yet been found to be associated with the SUR-2 gene.

### CHROMOSOMAL LOCATION

Genetic locus: ABCC8 (human) mapping to 11p15.1; Abcc8 (mouse) mapping to 7 B4.

### SOURCE

SUR-1 (C-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of SUR-1 of human origin.

### PRODUCT

Each vial contains 100  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-5789 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

### APPLICATIONS

SUR-1 (C-16) is recommended for detection of SUR-1 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).

SUR-1 (C-16) is also recommended for detection of SUR-1 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for SUR-1 siRNA (h): sc-42634, SUR-1 siRNA (m): sc-42635, SUR-1 siRNA (r): sc-270007, SUR-1 shRNA Plasmid (h): sc-42634-SH, SUR-1 shRNA Plasmid (m): sc-42635-SH, SUR-1 shRNA Plasmid (r): sc-270007-SH, SUR-1 shRNA (h) Lentiviral Particles: sc-42634-V, SUR-1 shRNA (m) Lentiviral Particles: sc-42635-V and SUR-1 shRNA (r) Lentiviral Particles: sc-270007-V.

Molecular Weight of mature glycosylated SUR-1: 150-180 kDa.

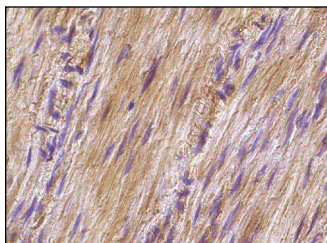
Molecular Weight of immature glycosylated SUR-1: 140 kDa.

Positive Controls: MIA PaCa-2 cell lysate: sc-2285, JAR cell lysate: sc-2276 or rat brain extract: sc-2392.

### STORAGE

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

### DATA



SUR-1 (C-16): sc-5789. Immunoperoxidase staining of formalin fixed, paraffin-embedded human colon tissue showing cytoplasmic staining of smooth muscle cells.

### SELECT PRODUCT CITATIONS

- Lacza, Z., et al. 2003. Heart mitochondria contain functional ATP-dependent K<sup>+</sup> channels. *J. Mol. Cell. Cardiol.* 35: 1339-1347.
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- Patel, A.D., et al. 2010. Glibenclamide reduces hippocampal injury and preserves rapid spatial learning in a model of traumatic brain injury. *J. Neuropathol. Exp. Neurol.* 69: 1177-1190.
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- Xu, C., et al. 2011. Expression of ATP-sensitive potassium channels in human pregnant myometrium. *Reprod. Biol. Endocrinol.* 9: 35.
- Geng, X., et al. 2011.  $\alpha$ -synuclein binds the K(ATP) channel at Insulin-secretory granules and inhibits Insulin secretion. *Am. J. Physiol. Endocrinol. Metab.* 300: E276-E286.
- Woo, S.K., et al. 2012. Sequential activation of hypoxia-inducible factor 1 and specificity protein 1 is required for hypoxia-induced transcriptional stimulation of Abcc8. *J. Cereb. Blood Flow Metab.* 32: 525-536.

### RESEARCH USE

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



Try **SUR-1 (3G5): sc-293436**, our highly recommended monoclonal alternative to SUR-1 (C-16).