SANTA CRUZ BIOTECHNOLOGY, INC.

# Sulf-2 (C-16): sc-68838

SANTA CRUZ BIOTECHNOLOGY

*The Power to Question*

## BACKGROUND

Sulf-2 (sulfatase 2), also known as HSULF-2, is an extracellular endosulfatase belonging to the sulfatase family. Members of the sulfatase family each contain a conserved active site with a posttranslationally generated α-formylglycine that is essential for their catalytic activity. These enzymes are responsible for the hydrolysis of sulfate ester bonds. Sulf-1 (sulfatase 1) and Sulf-2 specifically interact with heparin sulfate proteoglycans (HSPGs) and hydrolyze the glucosamine-6-sulfate modifications, thus regulating the interactions of HSPGs with a variety of signaling molecules. As key components of cell surfaces and extracellular matrices, HSPGs modulate growth factor activities and thereby influence cell growth and differentiation. Additionally, HSPGs play a critical role in regulating tumor cell metastasis by mediating cell adhesion and the activities of growth and angiogenic factors. This suggests an important role for Sulf-1 and Sulf-2 in tumor progression.

## REFERENCES


1. Morimoto-Tomita, M., Uchimura, K., Werb, Z., Hemmerich, S. and Rosen, S.D. 2002. Cloning and characterization of two extracellular heparin-degrading endosulfatases in mice and humans. J. Biol. Chem. 277: 49175-49185.
2. Saad, O.M., Ebel, H., Uchimura, K., Rosen, S.D., Bertozzi, C.R. and Leary, J.A. 2005. Compositional profiling of heparin/heparan sulfate using mass spectrometry: assay for specificity of a novel extracellular human endosulfatase. Glycobiology 15: 818-826.
3. Dai, Y., Yang, Y., MacLeod, V., Yue, X., Rapraeger, A.C., Shriver, Z., Venkataraman, G., Sasisekharan, R. and Sanderson, R.D. 2005. HSulf-1 and HSulf-2 are potent inhibitors of myeloma tumor growth *in vivo*. J. Biol. Chem. 280: 40066-40073.
4. Morimoto-Tomita, M., Uchimura, K., Bistrup, A., Lum, D.H., Egeblad, M., Boudreau, N., Werb, Z. and Rosen, S.D. 2005. Sulf-2, a proangiogenic heparan sulfate endosulfatase, is upregulated in breast cancer. Neoplasia 7: 1001-1010.


## CHROMOSOMAL LOCATION

Genetic locus: SULF2 (human) mapping to 20q13.12; Sulf2 (mouse) mapping to 2 H3.

## SOURCE

Sulf-2 (C-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of Sulf-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-68838 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## STORAGE

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

## APPLICATIONS

Sulf-2 (C-16) is recommended for detection of Sulf-2 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).

Sulf-2 (C-16) is also recommended for detection of Sulf-2 in additional species, including equine, canine, bovine and porcine.

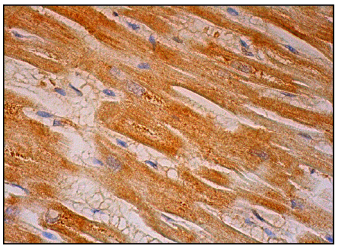
Suitable for use as control antibody for Sulf-2 siRNA (h): sc-63088, Sulf-2 siRNA (m): sc-63089, Sulf-2 shRNA Plasmid (h): sc-63088-SH, Sulf-2 shRNA Plasmid (m): sc-63089-SH, Sulf-2 shRNA (h) Lentiviral Particles: sc-63088-V and Sulf-2 shRNA (m) Lentiviral Particles: sc-63089-V.

Molecular Weight (predicted) of Sulf-2: 100 kDa.

Molecular Weight (observed) of Sulf-2: 68 kDa.

Positive Controls: mouse liver extract: sc-2256 or Hep G2 cell lysate: sc-2227.

## DATA



Sulf-2 (C-16): sc-68838. Immunoperoxidase staining of formalin fixed, paraffin-embedded human heart muscle tissue showing cytoplasmic staining of myocytes.

## RESEARCH USE

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

## PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.