

Sulf-2 (H-80): sc-68436

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 -formyl-glycine 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

- Morimoto-Tomita, M., et al. 2002. Cloning and characterization of two extracellular heparin-degrading endosulfatases in mice and humans. *J. Biol. Chem.* 277: 49175-49185.
- Saad, O.M., et al. 2005. Compositional profiling of heparin/heparan sulfate using mass spectrometry: assay for specificity of a novel extracellular human endosulfatase. *Glycobiology* 15: 818-826.
- Dai, Y., et al. 2005. HSulf-1 and HSulf-2 are potent inhibitors of myeloma tumor growth *in vivo*. *J. Biol. Chem.* 280: 40066-40073.
- Morimoto-Tomita, M., et al. 2005. Sulf-2, a proangiogenic heparan sulfate endosulfatase, is upregulated in breast cancer. *Neoplasia* 7: 1001-1010.
- Uchimura, K., et al. 2006. Measuring the activities of the Sulfs: two novel heparin/heparan sulfate endosulfatases. *Methods Enzymol.* 416: 243-253.
- Sjöblom, T., et al. 2006. The consensus coding sequences of human breast and colorectal cancers. *Science* 314: 268-274.

CHROMOSOMAL LOCATION

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

SOURCE

Sulf-2 (H-80) is a rabbit polyclonal antibody raised against amino acids 481-560 mapping within an extracellular domain of Sulf-2 of human origin.

PRODUCT

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

STORAGE

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

RESEARCH USE

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

APPLICATIONS

Sulf-2 (H-80) is recommended for detection of Sulf-2 of human and, to a lesser extent, mouse and rat origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], 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).

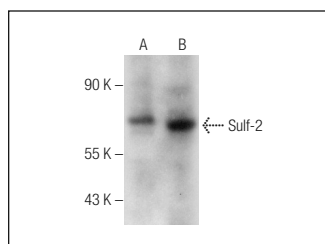
Suitable for use as control antibody for Sulf-2 siRNA (h): sc-63088, Sulf-2 siRNA (m): sc-63089, Sulf-2 shRNA Plasmid (h): sc-63088-SH, Sulf-2 shRNA Plasmid (m): sc-63089-SH, Sulf-2 shRNA (h) Lentiviral Particles: sc-63088-V and Sulf-2 shRNA (m) Lentiviral Particles: sc-63089-V.

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

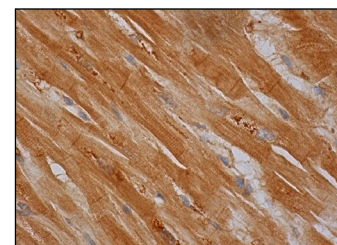
Molecular Weight (observed) of Sulf-2: 68 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227.

DATA



Sulf-2 (H-80): sc-68436. Western blot analysis of Sulf-2 expression in mouse liver (A) and rat ovary (B) tissue extracts.



Sulf-2 (H-80): sc-68436. Immunoperoxidase staining of formalin fixed, paraffin-embedded human heart muscle tissue showing cytoplasmic and membrane staining of myocytes.

SELECT PRODUCT CITATIONS

- Chen, K., et al. 2010. Type 2 diabetes in mice induces hepatic overexpression of sulfatase 2, a novel factor that suppresses uptake of remnant lipoproteins. *Hepatology* 52: 1957-1967.

PROTOCOLS

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



Try **Sulf-2 (G-4): sc-271772**, our highly recommended monoclonal alternative to Sulf-2 (H-80).