

## ETBR (C-20): sc-21196

### BACKGROUND

Endothelin receptor B (ETBR), also known as EDNRB, ETB, ETRB, HSCR and HSCR2, is a member of the guanine-binding, regulatory protein-coupled receptor family. Three isoforms of ETBR exist called isoform 1, isoform 2 and  $\delta$  3. ETBR is involved in the regulation of sodium excretion and glomerular filtration rate (GFR). ETBR plays a role in the normal development of the neural crest-derived cell lineages, epidermal melanocytes and enteric neurons. ETBR is expressed in lung, kidney, placenta, skeletal muscle and stem villi vessels. Both of the ET receptors, ETAR and ETBR, are activated by ET1, which results in inhibition of active lens sodium-potassium transport. Activation of the ET receptors also causes an increase in cytoplasmic calcium concentration in cultured lens epithelial cells. ETBR deficiency causes early onset dysfunction of the kidney, characterized by reduced sodium excretion, decreased GFR and slightly elevated blood pressure. Mutations in the gene encoding ETBR produce congenital aganglionic megacolon and pigment abnormalities. The multigenic disorder, Hirschsprung disease Type 2, is also due to a mutation in the ETBR gene.

### CHROMOSOMAL LOCATION

Genetic locus: EDNRB (human) mapping to 13q22.3; Ednrb (mouse) mapping to 14 E2.3.

### SOURCE

ETBR (C-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of ETBR 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-21196 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

### APPLICATIONS

ETBR (C-20) is recommended for detection of ETBR isoform 1 and  $\delta$  3 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ 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).

ETBR (C-20) is also recommended for detection of ETBR isoform 1 and  $\delta$  3 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for ETBR siRNA (h): sc-39962, ETBR siRNA (m): sc-39963, ETBR shRNA Plasmid (h): sc-39962-SH, ETBR shRNA Plasmid (m): sc-39963-SH, ETBR shRNA (h) Lentiviral Particles: sc-39962-V and ETBR shRNA (m) Lentiviral Particles: sc-39963-V.

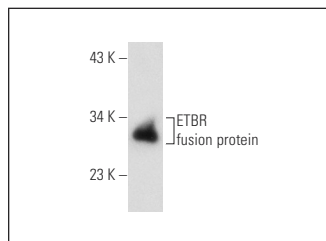
Molecular Weight of ETBR: 50 kDa.

Positive Controls: mouse heart extract: sc-2254 or mouse embryo extract: sc-364239.

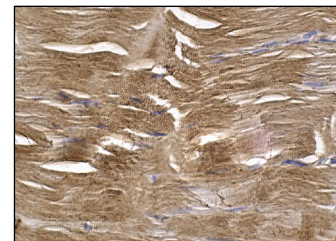
### STORAGE

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

### DATA



ETBR (C-20): sc-21196. Western blot analysis of human recombinant ETBR fusion protein.



ETBR (C-20): sc-21196. Immunoperoxidase staining of formalin fixed, paraffin-embedded human skeletal muscle tissue showing cytoplasmic staining of myocytes.

### SELECT PRODUCT CITATIONS

1. Nilsson, D., et al. 2008. Up-regulation of endothelin type B receptors in the human internal mammary artery in culture is dependent on protein kinase C and mitogen-activated kinase signaling pathways. *BMC Cardiovasc. Disord.* 8: 21.
2. Xie, Y.H., et al. 2010. Up-regulation of G protein-coupled receptors for endothelin and thromboxane by lipid-soluble smoke particles in renal artery of rat. *Basic Clin. Pharmacol. Toxicol.* 107: 803-812.
3. Nilsson, M.C., et al. 2010. Distant effects of nitric oxide inhalation in endotoxemic pigs. *Crit. Care Med.* 38: 242-248.
4. Dimitrijevic, I., et al. 2010. Increased tissue endothelin-1 and endothelin-B receptor expression in temporal arteries from patients with giant cell arteritis. *Ophthalmology* 117: 628-636.
5. Asundi, J., et al. 2011. An antibody-drug conjugate targeting the endothelin B receptor for the treatment of melanoma. *Clin. Cancer Res.* 17: 965-975.
6. Persson, B.P., et al. 2011. Endotoxin induces differentiated contractile responses in porcine pulmonary arteries and veins. *J. Vasc. Res.* 48: 206-218.
7. Reijerkerk, A., et al. 2012. Brain endothelial barrier passage by monocytes is controlled by the endothelin system. *J. Neurochem.* 121: 730-737.

### RESEARCH USE

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

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Try **ETBR (5H2): sc-293198**, our highly recommended monoclonal alternative to ETBR (C-20).