

# ETBR (A-20): sc-21195

## 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.

## REFERENCES

- Adachi, M., et al. 1991. Cloning and characterization of cDNA encoding human A-type endothelin receptor. *Biochem. Biophys. Res. Commun.* 180: 1265-1272.
- Puffenberger, E.G., et al. 1994. A missense mutation of the endothelin B receptor gene in multigenic Hirschsprung's disease. *Cell* 79: 1257-1266.
- Garipey, C.E., et al. 1996. Null mutation of endothelin receptor type B gene in spotting lethal rats causes aganglionic megacolon and white coat color. *Proc. Natl. Acad. Sci. USA* 93: 867-872.
- Hocher, B., et al. 2001. Impaired sodium excretion, decreased glomerular filtration rate and elevated blood pressure in endothelin receptor type B deficient rats. *J. Mol. Med.* 78: 633-641.
- Okafor, M., et al. 2001. The inhibitory influence of endothelin on active sodium-potassium transport in porcine lens. *Invest. Ophthalmol. Vis. Sci.* 42: 1018-1023.

## CHROMOSOMAL LOCATION

Genetic locus: EDNRB (human) mapping to 13q22.3.

## SOURCE

ETBR (A-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of ETBR of human origin.

## PRODUCT

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

Blocking peptide available for competition studies, sc-21195 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## RESEARCH USE

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

## APPLICATIONS

ETBR (A-20) is recommended for detection of ETBR isoform 2 and  $\delta$  3 of 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

ETBR (A-20) is also recommended for detection of ETBR isoform 2 and delta 3 in additional species, including canine.

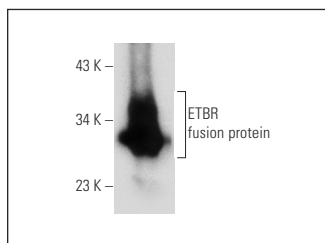
Suitable for use as control antibody for ETBR siRNA (h): sc-39962, ETBR shRNA Plasmid (h): sc-39962-SH and ETBR shRNA (h) Lentiviral Particles: sc-39962-V.

Molecular Weight of ETBR: 50 kDa.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## DATA



ETBR (A-20): sc-21195. Western blot analysis of human recombinant ETBR fusion protein.

## STORAGE

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



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