SANTA CRUZ BIOTECHNOLOGY, INC.

ETBR (C-5): sc-518149

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 δ 3. ETBR is involved in the regulation of sodium excretion and glomular 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's disease type 2, is also due to a mutation in the ETBR gene.

REFERENCES

1. Adachi, M., et al. 1991. Cloning and characterization of cDNA encoding human A-type endothelin receptor. Biochem. Biophys. Res. Commun. 180: 1265-1272.
2. Puffenberger, E.G., et al. 1994. A missense mutation of the endothelin B receptor gene in multigenic Hirschsprung's disease. Cell 79: 1257-1266.
3. Gariepy, 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.
4. Hocher, B., et al. 2001. Impaired sodium excretion, decreased glomular filtration rate and evevated blood pressure in endothelin receptor type B deficient rats. J. Mol. Med. 78: 633-641.

CHROMOSOMAL LOCATION

Genetic locus: Ednrb (mouse) mapping to 14 E2.3.

SOURCE

ETBR (C-5) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 232-255 of ETBR of mouse origin.

PRODUCT

Each vial contains 200 µg IgM kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

ETBR (C-5) is available conjugated to agarose (sc-518149 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-518149 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-518149 PE), fluorescein (sc-518149 FITC), Alexa Fluor® 488 (sc-518149 AF488), Alexa Fluor® 546 (sc-518149 AF546), Alexa Fluor® 594 (sc-518149 AF594) or Alexa Fluor® 647 (sc-518149 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-518149 AF680) or Alexa Fluor® 790 (sc-518149 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

ETBR (C-5) is recommended for detection of ETBR of mouse and rat origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg 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).

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

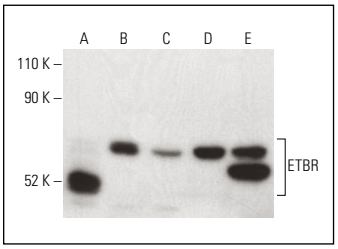
Molecular Weight of ETBR: 50 kDa.

Positive Controls: AMJ2-C8 whole cell lysate: sc-364366, A-431 whole cell lysate: sc-2201 or c4 whole cell lysate: sc-364186.

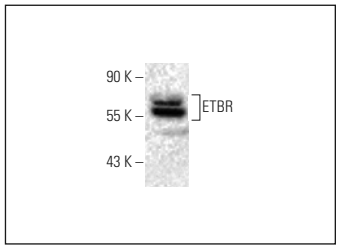
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein L-Agarose: sc-2336 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



ETBR (C-5): sc-518149. Western blot analysis of ETBR expression in 293T (**A**), U-266 (**B**), A-431 (**C**), U-251-MG (**D**) and c4 (**E**) whole cell lysates. Detection reagent used: m-IgGκ BP-HRP: sc-516102.



ETBR (C-5): sc-518149. Western blot analysis of ETBR expression in AMJ2-C8 whole cell lysate. Detection reagent used: m-IgGκ BP-HRP: sc-516102.

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.

PROTOCOLS

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