SANTA CRUZ BIOTECHNOLOGY, INC.

ETAR (D-2): sc-518060

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Endothelin receptor A (ETAR), also known as EDNRA, ET1 Receptor, ETA, EDN1 and ET-AR is a member of the Guanine-binding regulatory protein-coupled receptor family. ETAR binds endothelins and has the highest affinity for its ligand ET1, as compared to the ETBR receptor. Both 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. In addition, ETAR induces arachidonic acid accumulation. ETAR has seven hydrophobic transmembrane domains and is expressed in aorta, lung, atrium, kidney, placenta and prostate. Specifically, placental vascular smooth muscle cells (PVSMCs) exclusively express ETAR.

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. Lin, H., et al. 1991. Cloning and functional expression of a vascular smooth muscle endothelin 1 receptor. Proc. Natl. Acad. Sci. USA 88: 3185-3189.
3. Kobayashi, S., et al. 1994. Binding and functional properties of endothelin receptor subtypes in the human prostate. Mol. Pharmacol. 45: 306-311.
4. Miyamoto, Y., et al. 1996. Alternative RNA splicing of the human endothelin-A receptor generates multiple transcripts. Biochem. J. 313: 795-801.
5. Okafor, M., et al. 2001. The inhibatory influence of endothelin on active sodium-potassium transport in porcine lens. Invest. Ophthalmol. Vis. Sci. 42: 1018-1023.

CHROMOSOMAL LOCATION

Genetic locus: EDNRA (human) mapping to 4q31.22; Ednra (mouse) mapping to 8 C1.

SOURCE

ETAR (D-2) is a mouse monoclonal antibody raised against amino acids 21-80 mapping within an N-terminal extracellular domain of ETAR of mouse origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

ETAR (D-2) is available conjugated to agarose (sc-518060 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-518060 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-518060 PE), fluorescein (sc-518060 FITC), Alexa Fluor® 488 (sc-518060 AF488), Alexa Fluor® 546 (sc-518060 AF546), Alexa Fluor® 594 (sc-518060 AF594) or Alexa Fluor® 647 (sc-518060 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-518060 AF680) or Alexa Fluor® 790 (sc-518060 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

RESEARCH USE

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

APPLICATIONS

ETAR (D-2) is recommended for detection of ETAR of mouse, rat and human 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).

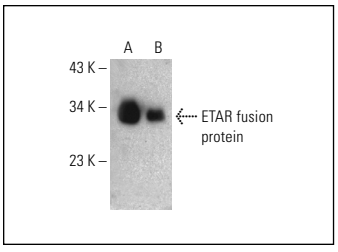
Suitable for use as control antibody for ETAR siRNA (h): sc-39960, ETAR siRNA (m): sc-39961, ETAR siRNA (r): sc-270097, ETAR shRNA Plasmid (h): sc-39960-SH, ETAR shRNA Plasmid (m): sc-39961-SH, ETAR shRNA Plasmid (r): sc-270097-SH, ETAR shRNA (h) Lentiviral Particles: sc-39960-V, ETAR shRNA (m) Lentiviral Particles: sc-39961-V and ETAR shRNA (r) Lentiviral Particles: sc-270097-V.

Molecular Weight of ETAR: 69 kDa.

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 A/G PLUS-Agarose: sc-2003 (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



ETAR (D-2): sc-518060. Western blot analysis of ETAR expression in mouse recombinant (**A**) and human recombinant (**B**) ETAR fusion proteins.

SELECT PRODUCT CITATIONS

1. Qin, C., et al. 2022. The involvement of endothelin pathway in chronic psychological stress-induced bladder hyperalgesia through capsaicin-sensitive C-fiber afferents. J. Inflamm. Res. 15: 1209-1226.

STORAGE

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