SANTA CRUZ BIOTECHNOLOGY, INC.

ETAR (H-11): sc-518097

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.
6. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 131243. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
7. LocusLink Report (LocusID: 1909). http://www.ncbi.nlm.nih.gov/LocusLink

CHROMOSOMAL LOCATION

Genetic locus: EDNRA (human) mapping to 4q31.22.

SOURCE

ETAR (H-11) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 14-37 near the N-terminus of ETAR of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2b} kappa light chain 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.

APPLICATIONS

ETAR (H-11) is recommended for detection of ETAR of 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).

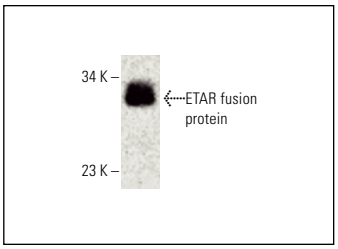
Suitable for use as control antibody for ETAR siRNA (h): sc-39960, ETAR shRNA Plasmid (h): sc-39960-SH and ETAR shRNA (h) Lentiviral Particles: sc-39960-V.

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 (H-11): sc-518097. Western blot analysis of human recombinant ETAR fusion protein. Detection reagent used: m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM.

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.