

# ETAR (H-60): sc-33535

## 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 (PVSMSs) exclusively express ETAR.

## REFERENCES

- Adachi, M., et al. 1991. Cloning and characterization of cDNA encoding human A-type endothelin receptor. *Biochem. Biophys. Res. Commun.* 180: 1265-1272.
- 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.
- Kobayashi, S., et al. 1994. Binding and functional properties of endothelin receptor subtypes in the human prostate. *Mol. Pharmacol.* 45: 306-311.
- Miyamoto, Y., et al. 1996. Alternative RNA splicing of the human endothelin-A receptor generates multiple transcripts. *Biochem. J.* 313: 795-801.
- 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.
- Online Mendelian Inheritance in Man, OMIM<sup>™</sup>. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 131243. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
- LocusLink Report (LocusID: 1909). <http://www.ncbi.nlm.nih.gov/LocusLink/>

## CHROMOSOMAL LOCATION

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

## SOURCE

ETAR (H-60) is a rabbit polyclonal antibody raised against amino acids 21-80 mapping within an N-terminal extracellular domain of ETAR of human origin.

## PRODUCT

Each vial contains 200 µg IgG 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.

## RESEARCH USE

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

## APPLICATIONS

ETAR (H-60) is recommended for detection of all ETAR isoforms of mouse, rat and human origin by Western Blotting (starting dilution 1:200, 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), 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).

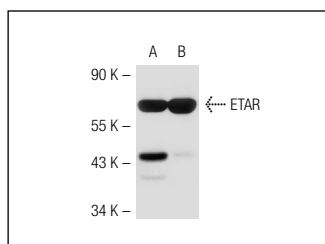
ETAR (H-60) is also recommended for detection of all ETAR isoforms in additional species, including equine, canine, bovine and porcine.

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

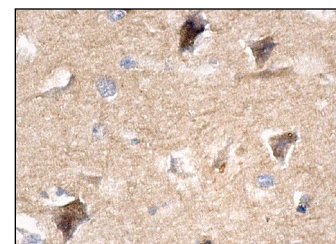
Molecular Weight of ETAR: 69 kDa.

Positive Controls: rat testis extract: sc-2400, mouse lung extract: sc-2390 or mouse heart extract: sc-2254.

## DATA



ETAR (H-60): sc-33535. Western blot analysis of ETAR expression in mouse heart (A) and mouse lung (B) tissue extracts.



ETAR (H-60): sc-33535. Immunoperoxidase staining of formalin fixed, paraffin-embedded human brain tissue showing cytoplasmic staining of neuronal cells.

## SELECT PRODUCT CITATIONS

- Deacon, K., et al. 2010. Endothelin-1 (ET-1) increases the expression of remodeling genes in vascular smooth muscle through linked calcium and cAMP pathways: role of a phospholipase A<sub>2</sub>(cPLA<sub>2</sub>)/cyclooxygenase-2 (COX-2)/prostacyclin receptor-dependent autocrine loop. *J. Biol. Chem.* 285: 25913-25927.
- Kikkawa, Y., et al. 2010. Impaired feedback regulation of the receptor activity and the myofilament Ca<sup>2+</sup> sensitivity contributes to increased vascular reactivity after subarachnoid hemorrhage. *J. Cereb. Blood Flow Metab.* 30: 1637-1650.
- Cao, L., et al. 2012. Cigarette smoke upregulates rat coronary artery endothelin receptors *in vivo*. *PLoS ONE* 7: e33008.



Try **ETAR (16): sc-135902**, our highly recommended monoclonal alternative to ETAR (H-60).