SANTA CRUZ BIOTECHNOLOGY, INC.

ET-2 (3B4-1C5): sc-293248

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The human endothelins represent a gene family comprised of endothelin-1, endothelin-2, and endothelin-3, also known as ET-1, ET-2, and ET-3. Endothelins can affect the central nervous system and neuronal excitability, and they elicit potent vasoconstrictor action. The two receptor subtypes responsible for inducing vasoconstriction and vasodilation, ETA and ETB, have different receptor affinities for ET-1, ET-2, and ET-3. The human endothelin-1, 2 and 3 genes (EDN1, EDN2, and EDN3) map to chromosome 6p24.1, 1p34.2, and 20q13.32, respectively. Of the three isopeptides, ET-2 has the most potent vasoconstrictor activity. Biologically active ETs are proteolytically generated from a larger precursor, the big-endothelin, by action of the endothelin-converting enzyme (ECE) family. ET-1 is a potent, 21-amino acid vasoconstrictor peptide produced by vascular endothelial cells. The ET-2 cDNA is 1.3 kb in length and encodes a proprotein consisting of 178 amino acid residues. ET3 mRNA en-codes a 230-amino acid precursor that includes ET3 and a 15-amino acid homologous segment called the ET3-like sequence.

REFERENCES

1. Inoue, A., Yanagisawa, M., Takuwa, Y., Mitsui, Y., Kobayashi, M. and Masaki, T. 1989. The human preproendothelin-1 gene. Complete nucleotide sequence and regulation of expression. J. Biol. Chem. 264: 14954-14959.
2. Arinami, T., Ishikawa, M., Inoue, A., Yanagisawa, M., Masaki, T., Yoshida, M.C. and Hamaguchi, H. 1991. Chromosomal assignments of the human endothelin family genes: the endothelin-1 gene (EDN1) to 6p23-p24, the endothelin-2 gene (EDN2) to 1p34, and the endothelin-3 gene (EDN3) to 20q13.2-q13.3. Am. J. Hum. Genet. 48: 990-996.
3. Nguyen, B.N. and Johnson, J.A. 1998. The role of endothelin in heart failure and hypertension. Pharmacotherapy 18: 706-719.
4. Online Mendelian Inheritance in Man, OMIM™. 1998. Johns Hopkins University, Baltimore, MD. MIM Number: 131241. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
5. Giannessi, D., Del Ry, S. and Vitale, R.L. 2001. The role of endothelins and their receptors in heart failure. Pharmacol. Res. 43: 111-126.

CHROMOSOMAL LOCATION

Genetic locus: EDN2 (human) mapping to 1p34.2.

SOURCE

ET-2 (3B4-1C5) is a mouse monoclonal antibody raised against a recombinant protein mapping to amino acids 1-178, representing full length ET-2 of human origin.

PRODUCT

Each vial contains 100 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

ET-2 (3B4-1C5) is recommended for detection of ET-2 of 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)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for ET-2 siRNA (h): sc-45396, ET-2 shRNA Plasmid (h): sc-45396-SH and ET-2 shRNA (h) Lentiviral Particles: sc-45396-V.

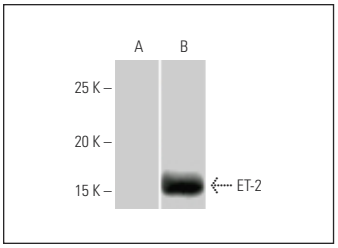
Molecular Weight of ET-2: 20 kDa.

Positive Controls: ET-2 transfected 293T whole cell lysate.

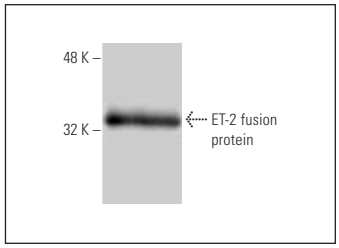
RECOMMENDED SUPPORT REAGENTS

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).

DATA



ET-2 (3B4-1C5): sc-293248. Western blot analysis of ET-2 expression in non-transfected (**A**) and ET-2 transfected (**B**) 293T whole cell lysates.



ET-2 (3B4-1C5): sc-293248. Western blot analysis of human recombinant ET-2 fusion protein.

SELECT PRODUCT CITATIONS

1. Im, E.J., Lee, C.H., Moon, P.G., Rangaswamy, G.G., Lee, B., Lee, J.M., Lee, J.C., Jee, J.G., Bae, J.S., Kwon, T.K., Kang, K.W., Jeong, M.S., Lee, J.E., Jung, H.S., Ro, H.J., Jun, S., Kang, W., Seo, S.Y., Cho, Y.E., Song, B.J., et al. 2019. Sulfisoxazole inhibits the secretion of small extracellular vesicles by targeting the endothelin receptor A. Nat. Commun. 10: 1387.

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.