

## ET-3 (C-6): sc-21628

### BACKGROUND

The endothelin (ET) family of proteins are vasoactive peptides that are involved in various functions throughout the body. ET-3 (endothelin 3), also known as EDN3, is a 238 amino acid secreted protein that belongs to the endothelin family and is essential for proper neuronal development. Expressed in placental stem villi vessels and in trophoblasts, ET-3 functions as a ligand for endothelin receptor type B (ETBR) and, through this interaction, mediates the maturation of enteric neurons and melanocytes. Although ET-3 is expressed as a 238 amino acid peptide, it is post-translationally modified to produce a short active isoform and a long inactive isoform. Defects in the gene encoding ET-3 are the cause of a variety of disorders, including Hirschsprung disease type 1 (HSCR1), congenital central hypoventilation syndrome (CCHS) and Waardenburg syndrome type IV (WS4).

### REFERENCES

- Hofstra, R.M., et al. 1996. A homozygous mutation in the endothelin-3 gene associated with a combined Waardenburg type 2 and Hirschsprung phenotype (Shah-Waardenburg syndrome). *Nat. Genet.* 12: 445-447.
- Bolk, S., et al. 1996. Endothelin-3 frameshift mutation in congenital central hypoventilation syndrome. *Nat. Genet.* 13: 395-396.
- Bidaud, C., et al. 1997. Endothelin-3 gene mutations in isolated and syndromic Hirschsprung disease. *Eur. J. Hum. Genet.* 5: 247-251.
- Dupin, E., et al. 2000. Endothelin 3 induces the reversion of melanocytes to glia through a neural crest-derived glial-melanocytic progenitor. *Proc. Natl. Acad. Sci. USA* 97: 7882-7887.
- Pingault, V., et al. 2001. A heterozygous endothelin 3 mutation in Waardenburg-Hirschsprung disease: is there a dosage effect of EDN3/EDNRB gene mutations on neurocristopathy phenotypes? *J. Med. Genet.* 38: 205-209.
- Al-Jiffry, B.O., et al. 2002. Endothelin-3 induces both human and opossum gallbladder contraction mediated mainly by endothelin-B receptor subtype *in vitro*. *J. Gastroenterol. Hepatol.* 17: 324-331.

### CHROMOSOMAL LOCATION

Genetic locus: EDN3 (human) mapping to 20q13.32; Edn3 (mouse) mapping to 2 H4.

### SOURCE

ET-3 (C-6) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of ET-3 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.

Blocking peptide available for competition studies, sc-21628 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

### RESEARCH USE

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

### APPLICATIONS

ET-3 (C-6) is recommended for detection of ET-3 precursor and processed active peptide 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for ET-3 siRNA (h): sc-45397, ET-3 siRNA (m): sc-45398, ET-3 shRNA Plasmid (h): sc-45397-SH, ET-3 shRNA Plasmid (m): sc-45398-SH, ET-3 shRNA (h) Lentiviral Particles: sc-45397-V and ET-3 shRNA (m) Lentiviral Particles: sc-45398-V.

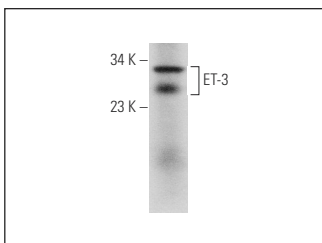
Molecular Weight of ET-3: 25 kDa.

Positive Controls: LNCaP cell lysate: sc-2231 or mouse lung extract: sc-2390.

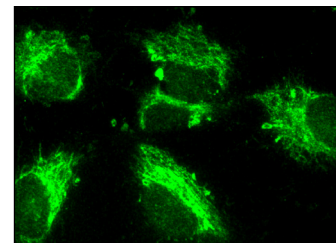
### RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 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 donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

### DATA



ET-3 (C-6): sc-21628. Western blot analysis of ET-3 expression in mouse lung tissue extract.



ET-3 (C-6): sc-21628. Immunofluorescence staining of formalin-fixed HepG2 cells showing cytoplasmic localization.

### STORAGE

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

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Try **ET-3 (5E8): sc-81944**, our highly recommended monoclonal alternative to ET-3 (C-6).