

# ET-1/2/3 (H-38): sc-98727

## BACKGROUND

The endothelin (ET) family of proteins, which includes ET-1 (endothelin-1), ET-2 (endothelin-2) and ET-3 (endothelin-3), are vasoactive peptides that are involved in various functions throughout the body. Endothelins can affect the central nervous system and neuronal excitability, and they elicit potent vasoconstrictor action. While ET-1 is a potent, 21 amino acid vasoconstrictor peptide, ET-2 has the most potent vasoconstrictor activity. 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 posttranslationally 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.

## SOURCE

ET-1/2/3 (H-38) is a rabbit polyclonal antibody raised against amino acids 51-90 mapping within an internal region of endothelin-1 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.

## APPLICATIONS

ET-1/2/3 (H-38) is recommended for detection of ET-1, ET-2 and, to lesser extent, ET-3 processed active peptides 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).

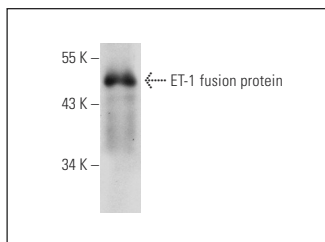
ET-1/2/3 (H-38) is also recommended for detection of ET-1, ET-2, and to lesser extent ET-3 processed active peptides in additional species, including canine, bovine and feline.

Molecular Weight of ET-1/2/3: 24/20/25 kDa.

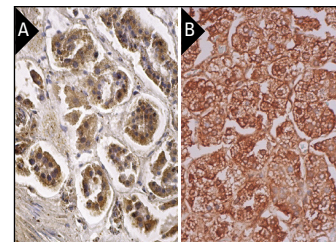
## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941. 4) Immunohistochemistry: use ImmunoCruz™: sc-2051 or ABC: sc-2018 rabbit IgG Staining Systems.

## DATA



ET-1/2/3 (H-38): sc-98727. Western blot analysis of full length human recombinant ET-1 fusion protein.



ET-1/2/3 (H-38): sc-98727. Immunoperoxidase staining of formalin fixed, paraffin-embedded human kidney tissue showing cytoplasmic staining of cells in tubules (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human adrenal gland tissue showing cytoplasmic and membrane staining of glandular cells (B).

## SELECT PRODUCT CITATIONS

- Korzekwa, A.J., et al. 2011. Characterization of bovine immortalized luteal endothelial cells: action of cytokines on production and content of arachidonic acid metabolites. *Reprod. Biol. Endocrinol.* 9: 27.
- Matteucci, E., et al. 2013. Epigenetic control of endothelin-1 axis affects invasiveness of breast carcinoma cells with bone tropism. *Exp. Cell Res.* 319: 1865-1874.

## RESEARCH USE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.



Try **ET-2 (3B4-1C5): sc-293248**, our highly recommended monoclonal alternative to ET-1/2/3 (H-38).