



PACE4 (K-18): sc-22898

BACKGROUND

The subtilisin-like prohormone convertase (PC) family mediates the cleavage of latent precursor proteins into their biologically active forms. Such proteins include neuropeptides, polypeptide hormones, protein tyrosine phosphatases, growth factors and their receptors and enzymes. The members of the PC family include furin, PC1/3, PC2, PC4, PACE4, PC5/6 and PC7/8 (also designated lymphoma proprotein convertase or LPC). These proteins share a high degree of homology, but they have different expression patterns as well as substrate specificities. PACE4 is one of the neuroendocrine-specific mammalian subtilisin-related endoproteases believed to function in the secretory pathway.

REFERENCES

1. Rehemtulla, A., et al. 1993. PACE4 is a member of the mammalian propeptidase family that has overlapping but not identical substrate specificity to PACE. *Biochemistry* 32: 11586-11590.
2. Creemers, J.W., et al. 1993. Proprotein processing activity and cleavage site selectivity of the Kex2-like endoprotease PACE4. *FEBS Lett.* 336: 65-69.
3. Tsuji, A., et al. 1994. Identification of novel cDNAs encoding human kexin-like protease, PACE4 isoforms. *Biochem. Biophys. Res. Commun.* 200: 943-950.
4. Tsuji, A., et al. 1994. The tissue distribution of mRNAs for the PACE4 isoforms, kexin-like processing protease: PACE4C and PACE4D mRNAs are major transcripts among PACE4 isoforms. *Biochem. Biophys. Res. Commun.* 202: 1215-1221.
5. Johnson, R.C., et al. 1994. PACE4: a subtilisin-like endoprotease prevalent in the anterior pituitary and regulated by thyroid status. *Endocrinology* 135: 1178-1185.
6. Zhong, M., et al. 1996. Functional analysis of human PACE4-A and PACE4-C isoforms: identification of a new PACE4-CS isoform. *FEBS Lett.* 396: 31-36.
7. Mains, R.E., et al. 1997. PACE4: a subtilisin-like endoprotease with unique properties. *Biochem. J.* 321: 587-593.
8. Mori, K., et al. 1997. A novel human PACE4 isoform, PACE4E is an active processing protease containing a hydrophobic cluster at the carboxy terminus. *J. Biochem.* 121: 941-948.
9. Mori, K., et al. 1999. Subtilisin-like proprotein convertases, PACE4 and PC8, as well as furin, are endogenous proalbumin convertases in HepG2 cells. *J. Biochem.* 125: 627-633.

CHROMOSOMAL LOCATION

Genetic locus: PCSK6 (human) mapping to 15q26.3; Pcsk6 (mouse) mapping to 7 C.

SOURCE

PACE4 (K-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of PACE4 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-22898 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

PACE4 (K-18) is recommended for detection of PACE4 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

PACE4 (K-18) is also recommended for detection of PACE4 in additional species, including equine, canine and bovine.

Suitable for use as control antibody for PACE4 siRNA (h): sc-43990, PACE4 siRNA (m): sc-151985, PACE4 shRNA Plasmid (h): sc-43990-SH, PACE4 shRNA Plasmid (m): sc-151985-SH, PACE4 shRNA (h) Lentiviral Particles: sc-43990-V and PACE4 shRNA (m) Lentiviral Particles: sc-151985-V.

Molecular Weight of PACE4: 106 kDa.

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) 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.

SELECT PRODUCT CITATIONS

1. Freyer, C., et al. 2007. Pro-protein convertases (PCs) other than PC6 are not tightly regulated for implantation in the human endometrium. *Reproduction* 133: 1189-1197.

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.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.