

Pi16 (P-14): sc-163233

BACKGROUND

Pi16 (peptidase inhibitor 16), also known as Cripi (cysteine-rich protease inhibitor), is a 489 amino acid single-pass type I membrane protein that belongs to the CRISP family and CAP superfamily. Members of the CAP superfamily have similar protein structures, resulting in similar CAP domain function, although differences outside this region leads to modified target specificity. Interacting with PSP94, Pi16 is a putative serine protease inhibitor and is up-regulated in hypertrophic and failing myocardium. Increased expression of Pi16 may lead to an inhibition of cardiomyocyte growth. Pi16 exists as two alternatively spliced isoforms and is encoded by a gene that maps to mouse chromosome 17 A3.3.

REFERENCES

1. Zambrowicz, B.P., et al. 2003. Wnk1 kinase deficiency lowers blood pressure in mice: a gene-trap screen to identify potential targets for therapeutic intervention. *Proc. Natl. Acad. Sci. USA* 100: 14109-14114.
2. Frost, R.J., et al. 2007. A secretion trap screen in yeast identifies protease inhibitor 16 as a novel antihypertrophic protein secreted from the heart. *Circulation* 116: 1768-1775.
3. Crawford, N.P., et al. 2008. The Diasporin Pathway: a tumor progression-related transcriptional network that predicts breast cancer survival. *Clin. Exp. Metastasis* 25: 357-369.
4. Gibbs, G.M., et al. 2008. The CAP superfamily: cysteine-rich secretory proteins, antigen 5, and pathogenesis-related 1 proteins—roles in reproduction, cancer, and immune defense. *Endocr. Rev.* 29: 865-897.
5. Diez-Roux, G., et al. 2011. A high-resolution anatomical atlas of the transcriptome in the mouse embryo. *PLoS Biol.* 9: e1000582.

CHROMOSOMAL LOCATION

Genetic locus: Pi16 (mouse) mapping to 17 A3.3.

SOURCE

Pi16 (P-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an N-terminal extracellular domain of Pi16 of mouse 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-163233 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

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

Pi16 (P-14) is recommended for detection of Pi16 of mouse and rat 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); non cross-reactive with other CRISP family members.

Pi16 (P-14) is also recommended for detection of Pi16 in additional species, including equine.

Suitable for use as control antibody for Pi16 siRNA (m): sc-152247, Pi16 shRNA Plasmid (m): sc-152247-SH and Pi16 shRNA (m) Lentiviral Particles: sc-152247-V.

Molecular Weight of Pi16 isoform 1: 53 kDa.

Molecular Weight of Pi16 isoform 2: 25 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.

PROTOCOLS

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