

Pit-1 (L-20): sc-16289

BACKGROUND

Transcriptional regulators play a critical role in development by mediating tissue- and cell-specific transcription. POU domain factors are transcriptional regulators characterized by a bipartite DNA binding domain, which consists of two highly conserved regions, tethered by a variable linker of 14-26 amino acids. Pit-1, also known as growth hormone factor-1 (GHF-1), a member of the POU homeodomain family, is essential for the normal development of the anterior pituitary gland, where it is required for the formation of somatotropes, lactotropes and thyrotropes. In somatotropes and lactotropes, Pit-1 activates the production of growth hormone and Prolactin, respectively. In addition, Pit-1 acts as a repressor of gene expression, which allows for the differentiation of specific cell types. Pit-1 is expressed as two alternatively spliced products, designated Pit-1a and Pit-1b, which differ in their *trans*-activation ability. Mutations in the Pit-1 gene are believed to result in combined pituitary hormone deficiency (CPHD) for growth hormone, Prolactin and thyroid stimulating hormone. The gene which encodes Pit-1 maps to human chromosome 3p11.2.

REFERENCES

1. Herr, W., et al. 1989. The POU domain: a large conserved region in the mammalian Pit-1, Oct-1, Oct-2 and *Caenorhabditis elegans* UNC-86 gene products. *Genes Dev.* 2: 1513-1516.
2. Voss, J.W., et al. 1991. Alternative translation initiation site usage results in two structurally distinct forms of Pit-1. *J. Biol. Chem.* 266: 12832-12835.
3. Morris, A.E., et al. 1992. An alternatively spliced Pit-1 isoform altered in its ability to *trans*-activate. *Nucleic Acids Res.* 20: 1355-1361.
4. Ohta, K., et al. 1992. Characterization of the gene encoding human pituitary-specific transcription factor, Pit-1. *Gene* 122: 387-388.
5. Brown, M.R., et al. 1998. Central hypothyroidism reveals compound heterozygous mutations in the Pit-1 gene. *Horm. Res.* 49: 98-102.

CHROMOSOMAL LOCATION

Genetic locus: POU1F1 (human) mapping to 3p11.2; Pit1 (mouse) mapping to 16 C1.3.

SOURCE

Pit-1 (L-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of Pit-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. Also available as TransCruz reagent for Gel Supershift and ChIP applications, sc-16289 X, 200 µg/0.1 ml.

Blocking peptide available for competition studies, sc-16289 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.

APPLICATIONS

Pit-1 (L-20) is recommended for detection of Pit-1 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).

Pit-1 (L-20) is also recommended for detection of Pit-1 in additional species, including equine, canine, bovine, porcine and avian.

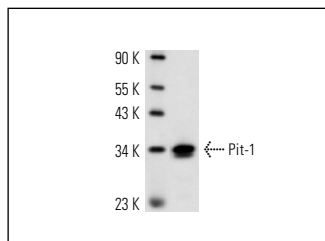
Suitable for use as control antibody for Pit-1 siRNA (h): sc-36234, Pit-1 siRNA (m): sc-36235, Pit-1 siRNA (r): sc-108037, Pit-1 shRNA Plasmid (h): sc-36234-SH, Pit-1 shRNA Plasmid (m): sc-36235-SH, Pit-1 shRNA Plasmid (r): sc-108037-SH, Pit-1 shRNA (h) Lentiviral Particles: sc-36234-V, Pit-1 shRNA (m) Lentiviral Particles: sc-36235-V and Pit-1 shRNA (r) Lentiviral Particles: sc-108037-V.

Pit-1 (L-20) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

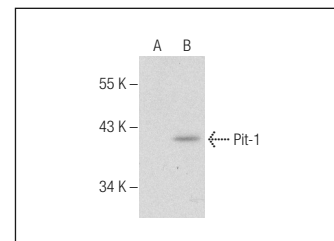
Molecular Weight of Pit-1 isoforms: 31-35 kDa.

Positive Controls: F9 cell lysate: sc-2245, Pit-1 (h): 293 Lysate: sc-159257 or GH3 whole cell lysate.

DATA



Pit-1 (L-20): sc-16289. Western blot analysis of Pit-1 expression in GH3 whole cell lysate.



Pit-1 (L-20): sc-16289. Western blot analysis of Pit-1 expression in non-transfected: sc-110760 (A) and human Pit-1 transfected: sc-159257 (B) 293 whole cell lysates.

SELECT PRODUCT CITATIONS

1. McElvaine, A.T., et al. 2007. Pituitary-specific expression and Pit-1 regulation of the rat growth hormone-releasing hormone receptor gene. *Mol. Endocrinol.* 21: 1969-1983.

RESEARCH USE

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

MONOS
Satisfaction
Guaranteed

Try **Pit-1 (G-2): sc-25258** or **Pit-1 (D-7): sc-393943**, our highly recommended monoclonal alternatives to Pit-1 (L-20).