

POU2F3 (K-20): sc-54993

BACKGROUND

Tissue-restricted POU domain transcription factors, which bind octamer or octamer-like gene sequences, play roles in cellular differentiation and the development of several organs. POU2F3, also designated Oct-11, PLA-1 protein or transcription factor Skn-1, represents a member of the class 2 POU domain family of transcriptional activators, highly related to Oct-2, that are selectively expressed in terminally differentiating epidermal and hair follicles. POU2F3 is characterized by an N-terminal domain that inhibits DNA binding and can inhibit transactivation by Oct-2. Alternative splicing of the N-terminus serves to activate cytokeratin 10 (K10) gene expression. When POU2F3 is expressed in eukaryotic cells it can bind to an octamer site, suggesting that *in vivo* cellular factors modulate the activity of the inhibitory domain to permit DNA-binding. The inhibitory domain does not allow transactivation by POU2F3 or by a heterologous transactivator containing this domain in cis. POU2F3 contributes to epidermal stratification by primarily promoting keratinocyte proliferation and secondarily by enhancing the subsequent keratinocyte differentiation.

REFERENCES

1. Goldsborough, A.S., et al. 1993. Cloning, chromosomal localization and expression pattern of the POU domain gene Oct-11. *Nucleic Acids Res.* 21: 127-134.
2. Andersen, B., et al. 1993. Skn-1a and Skn-1i: two functionally distinct Oct-2-related factors expressed in epidermis. *Science* 260: 78-82.
3. Andersen, B., et al. 1997. Characterization of Skn-1a/i POU domain factors and linkage to papillomavirus gene expression. *J. Biol. Chem.* 272: 15905-15913.
4. Andersen, B., et al. 1997. Functions of the POU domain genes Skn-1a/i and Tst-1/Oct-6/SCIP in epidermal differentiation. *Genes Dev.* 11: 1873-1884.
5. Hildesheim, J., et al. 1999. Characterization of the regulatory domains of the human skn-1a/Epoc-1/Oct-11 POU transcription factor. *J. Biol. Chem.* 274: 26399-26406.

CHROMOSOMAL LOCATION

Genetic locus: POU2F3 (human) mapping to 11q23.3; Pou2f3 (mouse) mapping to 9 A5.1.

SOURCE

POU2F3 (K-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of POU2F3 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-54993 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

Available as TransCruz reagent for Gel Supershift and ChIP applications, sc-54993 X, 200 µg/0.1 ml.

APPLICATIONS

POU2F3 (K-20) is recommended for detection of POU2F3 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).

POU2F3 (K-20) is also recommended for detection of POU2F3 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for POU2F3 siRNA (h): sc-38776, POU2F3 siRNA (m): sc-38777, POU2F3 shRNA Plasmid (h): sc-38776-SH, POU2F3 shRNA Plasmid (m): sc-38777-SH, POU2F3 shRNA (h) Lentiviral Particles: sc-38776-V and POU2F3 shRNA (m) Lentiviral Particles: sc-38777-V.

POU2F3 (K-20) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

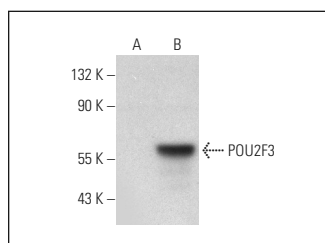
Molecular Weight of POU2F3: 47 kDa.

Positive Controls: POU2F3 (h): 293T Lysate: sc-369943.

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



POU2F3 (K-20): sc-54993. Western blot analysis of POU2F3 expression in non-transfected: sc-117752 (A) and human POU2F3 transfected: sc-369943 (B) 293T whole cell lysates.

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.