SANTA CRUZ BIOTECHNOLOGY, INC.

POU6F2 (F-7): sc-376709

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Tissue-restricted POU domain transcription factors play roles in cellular differentiation and the development of several organs. POU6F2 (POU class 6 homeobox 2), also known as RPF-1 (retina-derived POU domain factor 1), WT5 or WTSL, is a 683 amino acid nuclear protein expressed exclusively in the central nervous system (CNS). POU6F2 localizes to neurons of the dorsal hypo-thalamus, as well as retinal cells, where it is thought to function as a transcription factor during early amacrine and ganglion cell differentiation. Existing as two alternatively spliced isoforms, POU6F2 contains one homeobox DNA-binding domain, a single POU-specific domain, and is encoded by a gene that maps to human chromosome 7p14.1. POU6F2 defects are associated with Wilms tumor 5 (WT5).

REFERENCES

1. Zhou, H., et al. 1996. Retina-derived POU-domain factor-1: a complex POU-domain gene implicated in the development of retinal ganglion and amacrine cells. J. Neurosci. 16: 2261-2274.
2. Phillips, K., et al. 2000. The virtuoso of versatility: POU proteins that flex to fit. J. Mol. Biol. 302: 1023-1039.
3. Perotti, D., et al. 2001. Refinement within single yeast artificial chromosome clones of a minimal region commonly deleted on the short arm of chromosome 7 in Wilms tumours. Genes Chromosomes Cancer 31: 42-47.
4. Perotti, D., et al. 2004. Germline mutations of the POU6F2 gene in Wilms tumors with loss of heterozygosity on chromosome 7p14. Hum. Mutat. 24: 400-407.
5. Perotti, D., et al. 2005. Wilms tumor in monozygous twins: clinical, pathological, cytogenetic and molecular case report. J. Pediatr. Hematol. Oncol. 27: 521-525.

CHROMOSOMAL LOCATION

Genetic locus: POU6F2 (human) mapping to 7p14.1.

SOURCE

POU6F2 (F-7) is a mouse monoclonal antibody raised against amino acids 9-153 mapping near the N-terminus of POU6F2 of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

POU6F2 (F-7) is available conjugated to agarose (sc-376709 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-376709 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-376709 PE), fluorescein (sc-376709 FITC), Alexa Fluor® 488 (sc-376709 AF488), Alexa Fluor® 546 (sc-376709 AF546), Alexa Fluor® 594 (sc-376709 AF594) or Alexa Fluor® 647 (sc-376709 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-376709 AF680) or Alexa Fluor® 790 (sc-376709 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

POU6F2 (F-7) is recommended for detection of POU6F2 of human origin by Western Blotting (starting dilution 1:100, 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).

Suitable for use as control antibody for POU6F2 siRNA (h): sc-89556, POU6F2 shRNA Plasmid (h): sc-89556-SH and POU6F2 shRNA (h) Lentiviral Particles: sc-89556-V.

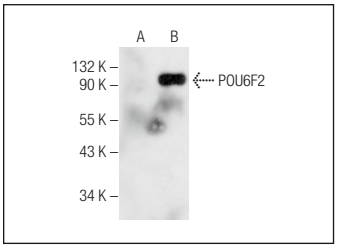
Molecular Weight of POU6F2: 72 kDa.

Positive Controls: POU6F2 (h): 293T Lysate: sc-175222, Y79 cell lysate: sc-2240 or A-431 whole cell lysate: sc-2201.

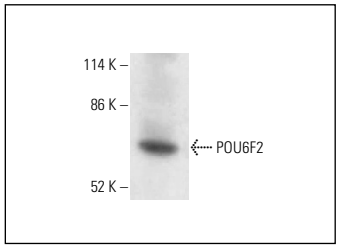
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



POU6F2 (F-7): sc-376709. Western blot analysis of POU6F2 expression in non-transfected: sc-117752 (**A**) and human POU6F2 transfected: sc-175222 (**B**) 293T whole cell lysates.



POU6F2 (F-7): sc-376709. Western blot analysis of POU6F2 expression in A-431 whole cell lysate. Detection reagent used: m-IgGκ BP-HRP: sc-516102.

SELECT PRODUCT CITATIONS

1. Yoshihara, M., et al. 2017. Restricted presence of POU6F2 in human corneal endothelial cells uncovered by extension of the promoter-level expression atlas. EBioMedicine 25: 175-186.

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.