SANTA CRUZ BIOTECHNOLOGY, INC.

Oct-1 (C-21): sc-232

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

POU domain proteins contain a bipartite DNA-binding domain divided by a flexible linker that enables them to adopt various monomer configurations on DNA. The versatility of POU protein operation is additionally conferred at the dimerization level. The POU dimer from the Oct-1 gene formed on the palindromic Oct factor recognition element, or PORE (ATTTGAAATGCAAAT), could recruit the transcriptional coactivator OBF1. Studies of tissue-specific expression of immunoglobulin promoters demonstrate the importance of an octamer, ATTTGCAT, and the proteins that bind to it. This is a regulatory element important for tissue- and cell-specific transcription as well as for transcription of a number of housekeeping genes. The Oct-1 gene encodes one protein, NF-A1, which is found in nuclear extracts from all cell types and thus is not specific to lymphoid cells, as is the protein NF-A2, which is encoded by the Oct-2 gene.

CHROMOSOMAL LOCATION

Genetic locus: POU2F1 (human) mapping to 1q24.1; Pou2f1 (mouse) mapping to 1 H2.3.

SOURCE

Oct-1 (C-21) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping at the C-terminus of Oct-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.

Blocking peptide available for competition studies, sc-232 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-232 X, 200 µg/0.1 ml.

APPLICATIONS

Oct-1 (C-21) is recommended for detection of Oct-1 of mouse, rat, human and *Xenopus laevis* 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 immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500). Oct-1 (C-21) is also recommended for detection of Oct-1 in additional species, including equine, canine and porcine. Suitable for use as control antibody for Oct-1 siRNA (h): sc-36119, Oct-1 siRNA (m): sc-36120, Oct-1 shRNA Plasmid (h): sc-36119-SH, Oct-1 shRNA Plasmid (m): sc-36120-SH, Oct-1 shRNA (h) Lentiviral Particles: sc-36119-V and Oct-1 shRNA (m) Lentiviral Particles: sc-36120-V.

Oct-1 (C-21) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of Oct-1: 95 kDa.

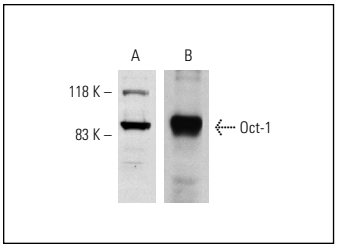
STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

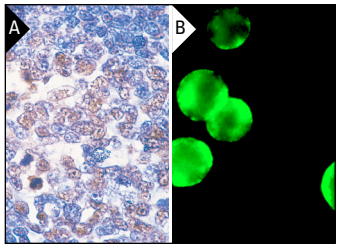
RESEARCH USE

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

DATA



Oct-1 (C-21): sc-232. Western blot analysis of Oct-1 expression in Jurkat nuclear extract (**A**) and WEHI-231 whole cell lysate (**B**).



Oct-1 (C-21): sc-232. Immunoperoxidase staining of formalin-fixed, paraffin-embedded normal human tonsil (**A**) and immunofluorescence staining of methanol-fixed Jurkat cells (**B**) showing nuclear localization.

SELECT PRODUCT CITATIONS

1. Sun, Z., et al. 1997. Androgen receptor-associated protein complex binds upstream of the androgen-responsive elements in the promoters of human prostate-specific antigen and kallikrein 2 genes. Nucleic Acids Res. 25: 3318-3325.
2. Lefort, K., et al. 2001. The specific activation of GADD 45 following UVB radiation requires the POU family gene product N-Oct-3 in human melanoma cells. Oncogene 20: 7375-7385.
3. Harte, M.T., et al. 2010. BRD7, a subunit of SWI/SNF complexes, binds directly to BRCA1 and regulates BRCA1-dependent transcription. Cancer Res. 70: 2538-2547.
4. Laurent, B., et al. 2010. High-mobility group protein HMGB2 regulates human erythroid differentiation through *trans*-activation of GFI1B transcription. Blood 115: 687-695.
5. Vykhovanets, E.V., et al. 2011. High-fat diet increases NFκB signaling in the prostate of reporter mice. Prostate 71: 147-156.
6. Takaoka, N., et al. 2011. Analysis of the regulation of fatty acid binding protein 7 expression in human renal carcinoma cell lines. BMC Mol. Biol. 12: 31.
7. Keating, G., et al. 2012. Regulation of the human prostacyclin receptor gene in megakaryocytes: Major roles for C/EBPδ and PU.1. Biochim. Biophys. Acta 1819: 428-445.