SANTA CRUZ BIOTECHNOLOGY, INC.

Oct-2 (PT2): sc-56822

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 OCT1 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. Oct-1 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 Oct-2.

CHROMOSOMAL LOCATION

Genetic locus: POU2F2 (human) mapping to 19q13.2.

SOURCE

Oct-2 (PT2) is a mouse monoclonal antibody raised against full length Oct-2 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. Also available as TransCruz reagent for Gel Supershift and ChIP applications, sc-56822 X, 200 µg/0.1 ml.

Oct-2 (PT2) is available conjugated to agarose (sc-56822 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-56822 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-56822 PE), fluorescein (sc-56822 FITC), Alexa Fluor® 488 (sc-56822 AF488), Alexa Fluor® 546 (sc-56822 AF546), Alexa Fluor® 594 (sc-56822 AF594) or Alexa Fluor® 647 (sc-56822 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-56822 AF680) or Alexa Fluor® 790 (sc-56822 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

Oct-2 (PT2) is recommended for detection of Oct-2 of 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), immunohistochemistry (including paraffin-embedded sections) (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 Oct-2 siRNA (h): sc-36121, Oct-2 shRNA Plasmid (h): sc-36121-SH and Oct-2 shRNA (h) Lentiviral Particles: sc-36121-V.

Oct-2 (PT2) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

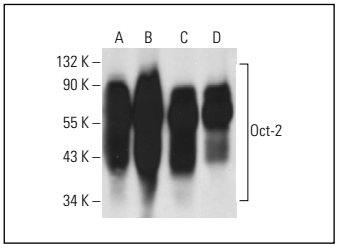
Molecular Weight of Oct-2A/Oct-2B: 60/75 kDa.

Positive Controls: U-937 cell lysate: sc-2239, NAMALWA cell lysate: sc-2234 or Raji whole cell lysate: sc-364236.

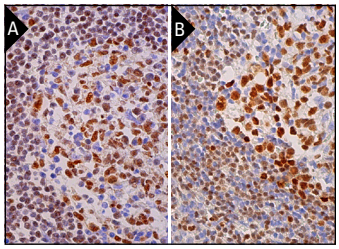
RECOMMENDED SUPPORT REAGENTS

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. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



Oct-2 (PT2): sc-56822. Western blot analysis of Oct-2 expression in Raji (**A**), GA-10 (**B**), NAMALWA (**C**) and U-937 (**D**) whole cell lysates.



Oct-2 (PT2): sc-56822. Immunoperoxidase staining of formalin fixed, paraffin-embedded human lymph node tissue (**A**) and human tonsil tissue (**B**) showing nuclear staining of cells in germinal center and cells in non-germinal center.

SELECT PRODUCT CITATIONS

1. Boreström, C., et al. 2012. E2F1, ARID3A/Bright and Oct-2 factors bind to the Epstein-Barr virus C promoter, EBNA1 and oriP, participating in long-distance promoter-enhancer interactions. J. Gen. Virol. 93: 1065-1075.
2. Momoi, A., et al. 2013. IL-6-positive classical Hodgkin's lymphoma co-occurring with plasma cell type of Castleman's disease: report of a case. Int. J. Hematol. 97: 275-279.
3. Shim, J.M., et al. 2017. BET proteins are a key component of immunoglobulin gene expression. Epigenomics 9: 393-406.
4. Aydin, E., et al. 2022. Prevention of cisplatin-induced nephrotoxicity by kidney-targeted sirna delivery. Int. J. Pharm. 628: 122268.

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.