

Oct-2 (H-3): sc-377476



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 (ATTGAAATGCAAAT), could recruit the transcriptional coactivator OBF1. Studies of tissue-specific expression of immunoglobulin promoters demonstrate the importance of an octamer, ATTGTCAT, 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; Pou2f2 (mouse) mapping to 7 A3.

SOURCE

Oct-2 (H-3) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 435-463 at the C-terminus of Oct-2 of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2b} 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-377476 X, 200 µg/0.1 ml.

Blocking peptide available for competition studies, sc-377476 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

Oct-2 (H-3) is recommended for detection of Oct-2 of mouse, rat and 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), 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).

Oct-2 (H-3) is also recommended for detection of Oct-2 in additional species, including canine.

Suitable for use as control antibody for Oct-2 siRNA (h): sc-36121, Oct-2 siRNA (m): sc-36122, Oct-2 shRNA Plasmid (h): sc-36121-SH, Oct-2 shRNA Plasmid (m): sc-36122-SH, Oct-2 shRNA (h) Lentiviral Particles: sc-36121-V and Oct-2 shRNA (m) Lentiviral Particles: sc-36122-V.

Oct-2 (H-3) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

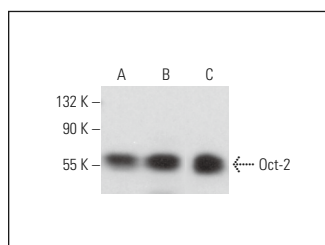
Molecular Weight of Oct-2A/Oct-2B: 60/75 kDa.

Positive Controls: GA-10 whole cell lysate: sc-364230, U-698-M whole cell lysate: sc-364799 or Raji whole cell lysate: sc-364236.

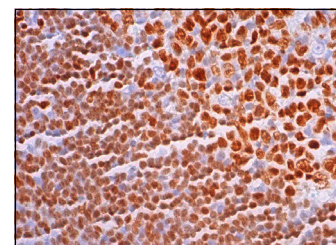
RECOMMENDED SUPPORT REAGENTS

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 (H-3): sc-377476. Western blot analysis of Oct-2 expression in Raji (A), GA-10 (B) and U-698-M (C) whole cell lysates.



Oct-2 (H-3): sc-377476. Immunoperoxidase staining of formalin fixed, paraffin-embedded human tonsil tissue showing nuclear staining of cells in germinal centers and cells in non-germinal centers.

SELECT PRODUCT CITATIONS

1. Chu, C.S., et al. 2020. Unique immune cell coactivators specify locus control region function and cell stage. *Mol. Cell* 80: 845-861.e10.
2. An, M.F., et al. 2023. Anti-hyperuricemia effect of hesperetin is mediated by inhibiting the activity of xanthine oxidase and promoting excretion of uric acid. *Front. Pharmacol.* 14: 1128699.

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.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.



See **Oct-2 (PT2): sc-56822** for Oct-2 antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.