

Ref-1 (N-16): sc-9904

BACKGROUND

The role of transcription factors in the regulation of gene expression is well established. Although the activity of these factors can be regulated by phosphorylation, evidence has indicated regulation of DNA binding mediated by changes in reduction-oxidation (redox) status. Mutational analysis has identified a single conserved cysteine residue mapping within the DNA binding domains of Fos and Jun. Chemical oxidation or modification of this cysteine residue inhibits the DNA binding activity of Fos and Jun. A similar mode of regulation has been recently proposed for other nuclear transcription factors. Oxidation is reversible by these compounds or by a cellular redox/DNA repair protein identified originally as Ref-1 (redox factor 1). Ref-1 is identical to a previously characterized DNA repair enzyme designated HAP1, APE or APEX.

CHROMOSOMAL LOCATION

Genetic locus: APEX1 (human) mapping to 14q11.2; Apex1 (mouse) mapping to 14 C3.

SOURCE

Ref-1 (N-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of Ref-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-9904 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-9904 X, 200 µg/0.1 ml.

STORAGE

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

APPLICATIONS

Ref-1 (N-16) is recommended for detection of Ref-1 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for Ref-1 siRNA (h): sc-29470, Ref-1 shRNA Plasmid (h): sc-29470-SH and Ref-1 shRNA (h) Lentiviral Particles: sc-29470-V.

Ref-1 (N-16) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

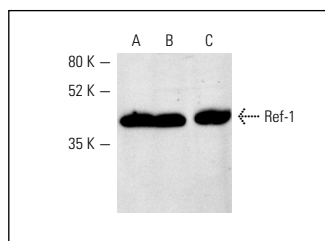
Molecular Weight of Ref-1: 37 kDa.

Positive Controls: human brain tumor, Y79 nuclear extract: sc-2126 or C32 nuclear extract: sc-2136.

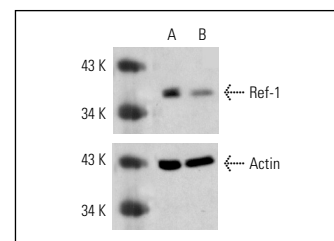
RECOMMENDED SECONDARY REAGENTS

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



Ref-1 (N-16): sc-9904. Western blot analysis of Ref-1 expression in Y79 (A), A-431 (B) and C32 (C) nuclear extracts.



Ref-1 siRNA (h): sc-29470. Western blot analysis of Ref-1 expression in non-transfected control (A) and Ref-1 siRNA transfected (B) HeLa cells. Blot probed with Ref-1 (N-16): sc-9904. Actin (I-19): sc-16116 used as specificity and loading control.

RESEARCH USE

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

PROTOCOLS

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



Try **Ref-1 (C-4): sc-17774** or **Ref-1 (H-6): sc-55498**, our highly recommended monoclonal alternatives to Ref-1 (N-16). Also, for AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647 conjugates, see **Ref-1 (C-4): sc-17774**.