

Ref-1 (E-17): sc-9919

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 C1.

SOURCE

Ref-1 (E-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping near 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-9919 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-9919 X, 200 µg/0.1 ml.

APPLICATIONS

Ref-1 (E-17) is recommended for detection of Ref-1 of mouse, rat and 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).

Ref-1 (E-17) is also recommended for detection of Ref-1 in additional species, including equine, canine and porcine.

Suitable for use as control antibody for Ref-1 siRNA (h): sc-29470, Ref-1 siRNA (m): sc-36401, Ref-1 siRNA (r): sc-72399, Ref-1 shRNA Plasmid (h): sc-29470-SH, Ref-1 shRNA Plasmid (m): sc-36401-SH, Ref-1 shRNA Plasmid (r): sc-72399-SH, Ref-1 shRNA (h) Lentiviral Particles: sc-29470-V, Ref-1 shRNA (m) Lentiviral Particles: sc-36401-V and Ref-1 shRNA (r) Lentiviral Particles: sc-72399-V.

Ref-1 (E-17) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

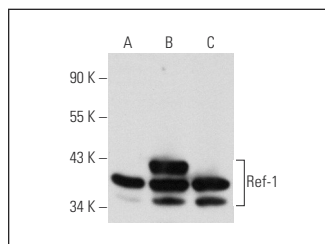
Molecular Weight of Ref-1: 37 kDa.

Positive Controls: Ref-1 (h2): 293T Lysate: sc-159150.

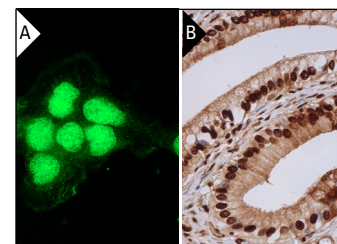
RECOMMENDED SECONDARY REAGENTS

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. 4) Immunohistochemistry: use ImmunoCruz™: sc-2053 or ABC: sc-2023 goat IgG Staining Systems.

DATA



Ref-1 (E-17): sc-9919. Western blot analysis of Ref-1 expression in non-transfected: sc-117752 (A) and human Ref-1 transfected: sc-159150 (B) 293T whole cell lysates and Y79 nuclear extract (C).



Ref-1 (E-17): sc-9919. Immunofluorescence staining of methanol-fixed A-431 cells showing nuclear staining (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human gall bladder tissue showing nuclear and cytoplasmic staining of glandular cells (B).

SELECT PRODUCT CITATIONS

1. Sakurai, M., et al. 2003. Oxidative damage and reduction of redox factor-1 expression after transient spinal cord ischemia in rabbits. *J. Vasc. Surg.* 37: 446-452.
2. Boesch-Saadatmandi, C., et al. 2012. Effect of quercetin on inflammatory gene expression in mice liver *in vivo*-role of redox factor 1, miRNA-122 and miRNA-125b. *Pharmacol. Res.* 65: 523-530.

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.

MONOS
Satisfaction
Guaranteed

Try **Ref-1 (C-4): sc-17774** or **Ref-1 (H-6): sc-55498**, our highly recommended monoclonal alternatives to Ref-1 (E-17). Also, for AC, HRP, FITC, PE, Alexa Fluor[®] 488 and Alexa Fluor[®] 647 conjugates, see **Ref-1 (C-4): sc-17774**.