SANTA CRUZ BIOTECHNOLOGY, INC.

# PREP-2 (Q-20): sc-55890

## BACKGROUND

PREP-2 (Pbx-regulating protein-2), also known as PBX/knotted 1 homeobox 2 or PKNOX2, is a widely expressed protein belonging to the TALE (three amino acid loop extension)/MEIS family. PREP-2 is a DNA-binding protein that forms stable complexes with Pbx proteins. It is highly homologous to the related protein PREP-1, but displays a more restricted tissue distribution and a higher DNA-dissociation rate. Like PREP-1, PREP-2 forms a heterodimer with Pbx 1. The PREP-2–Pbx 1 dimer is relocated to the nucleus where it associates with HoxB1 to form a ternary complex. In contrast with PREP-1, which acts to increase transcriptional activation in this ternary complex, PREP-2 leads to a slight decrease in transcriptional activity of the ternary complex. Multiple isoforms exist for PREP-2, localizing to the nucleus or cytoplasm. Cytoplasmic isoforms are believed to colocalize with F-Actin, G-Actin and Tubulin/microtubules.

## REFERENCES


1. Imoto, I., et al. 2001. Identification and characterization of human PKNOX2, a novel homeobox-containing gene. Biochem. Biophys. Res. Commun. 287: 270-276.
2. Haller, K., et al. 2002. PREP-2: cloning and expression of a new prep family member. Dev. Dyn. 225: 358-364.
3. Fognani, C., et al. 2002. Characterization of PREP-2, a paralog of PREP-1, which defines a novel sub-family of the MEINOX TALE homeodomain transcription factors. Nucleic Acids Res. 30: 2043-2051.
4. Haller, K., et al. 2004. Subcellular localization of multiple PREP-2 isoforms is regulated by Actin, Tubulin, and nuclear export. J. Biol. Chem. 279: 49384-49394.
5. Villaescusa, J.C., et al. 2004. Expression of Hox cofactor genes during mouse ovarian follicular development and oocyte maturation. Gene 330: 1-7.
6. Mee, L., et al. 2005. Hydrolethalus syndrome is caused by a missense mutation in a novel gene HYLS1. Hum. Mol. Genet. 14: 1475-1488.


## CHROMOSOMAL LOCATION

Genetic locus: PKNOX2 (human) mapping to 11q24.2; Pknox2 (mouse) mapping to 9 A4.

## SOURCE

PREP-2 (Q-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of PREP-2 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-55890 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-55890 X, 200 µg/0.1 ml.

## APPLICATIONS

PREP-2 (Q-20) is recommended for detection of PREP-2 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

PREP-2 (Q-20) is also recommended for detection of PREP-2 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for PREP-2 siRNA (h): sc-62856, PREP-2 siRNA (m): sc-62857, PREP-2 shRNA Plasmid (h): sc-62856-SH, PREP-2 shRNA Plasmid (m): sc-62857-SH, PREP-2 shRNA (h) Lentiviral Particles: sc-62856-V and PREP-2 shRNA (m) Lentiviral Particles: sc-62857-V.

PREP-2 (Q-20) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

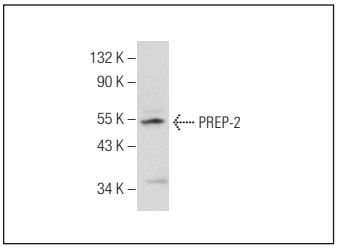
Molecular Weight of PREP-2: 70 kDa.

Positive Controls: HeLa nuclear extract: sc-2120, IMR-32 nuclear extract: sc-2148 or DU 145 cell lysate: sc-2268.

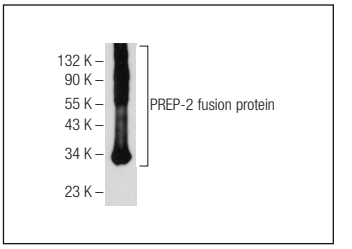
## RECOMMENDED SECONDARY REAGENTS

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




PREP-2 (Q-20): sc-55890. Western blot analysis of PREP-2 expression in DU 145 nuclear extract.




PREP-2 (Q-20): sc-55890. Western blot analysis of human recombinant PREP-2 fusion protein.

## 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.