

# NP220 (T-14): sc-161134

## BACKGROUND

Zinc-finger proteins contain DNA-binding domains and have a wide variety of functions, most of which encompass some form of transcriptional activation or repression. NP220 (nuclear protein 220), also designated zinc-finger protein 638 (ZNF638) or cutaneous T cell lymphoma-associated antigen Se33-1, is a 1,978 amino acid protein that contains one matrix-type zinc finger and 2 RRM (RNA recognition motif) domains, suggesting a role in transcriptional regulation. NP220 binds to double-stranded DNA fragments by recognizing clusters of cytidines. NP220 interacts with FHL-2 and is also thought to be phosphorylated by ATM or ATR upon DNA damage. It exists as five isoforms as a result of alternative splicing events. Isoform five of NP220 is a tumor-associated antigen found in several cutaneous T cell lymphoma (CTCL), and in particular in mycosis fungoides patients and in Sezary syndrome patients.

## REFERENCES

1. Matsushima, Y., Ohshima, M., Sonoda, M. and Kitagawa, Y. 1996. A family of novel DNA-binding nuclear proteins having polypyrimidine tract-binding motif and arginine/serine-rich motif. *Biochem. Biophys. Res. Commun.* 223: 427-433.
2. Inagaki, H., Matsushima, Y., Nakamura, K., Ohshima, M., Kadowaki, T. and Kitagawa, Y. 1996. A large DNA-binding nuclear protein with RNA recognition motif and serine/arginine-rich domain. *J. Biol. Chem.* 271: 12525-12531.
3. Matsushima, Y., Matsumura, K. and Kitagawa, Y. 1997. Zinc finger-like motif conserved in a family of RNA binding proteins. *Biosci. Biotechnol. Biochem.* 61: 905-906.
4. Okumura, K., Nogami, M., Matsushima, Y., Matsumura, K., Nakamura, K., Taguchi, H. and Kitagawa, Y. 1998. Mapping of human DNA-binding nuclear protein (NP220) to chromosome band 2p13.1-p13.2 and its relation to matrix 3. *Biosci. Biotechnol. Biochem.* 62: 1640-1642.

## CHROMOSOMAL LOCATION

Genetic locus: ZNF638 (human) mapping to 2p13.2; Zfml (mouse) mapping to 6 C3.

## SOURCE

NP220 (T-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of NP220 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-161134 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-161134 X, 200 µg/0.1 ml.

## APPLICATIONS

NP220 (T-14) is recommended for detection of NP220 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).

NP220 (T-14) is also recommended for detection of NP220 in additional species, including canine, bovine and porcine.

Suitable for use as control antibody for NP220 siRNA (h): sc-94523, NP220 siRNA (m): sc-150040, NP220 shRNA Plasmid (h): sc-94523-SH, NP220 shRNA Plasmid (m): sc-150040-SH, NP220 shRNA (h) Lentiviral Particles: sc-94523-V and NP220 shRNA (m) Lentiviral Particles: sc-150040-V.

NP220 (T-14) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

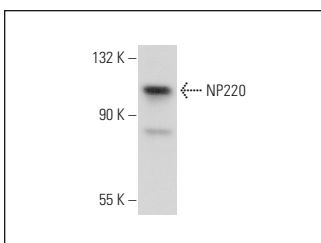
Molecular Weight of NP220: 221/92/218/128/119 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227.

## 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



NP220 (T-14): sc-161134. Western blot analysis of NP220 expression in Hep G2 whole cell lysate.

## 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.