

## TPR (C-20): sc-34363

### BACKGROUND

The vertebrate nuclear pore complex (NPC) is a macromolecular assembly of protein subcomplexes forming a structure of eightfold radial symmetry. The NPC core consists of globular subunits sandwiched between two coaxial ring-like structures of which the ring facing the nuclear interior is capped by a fibrous structure called the nuclear basket. The assembly of the NPC is a stepwise process in which TPR-containing peripheral structures assemble after other components, including p62. TPR localizes to intranuclear filaments of the NPC and is a component of the cytoplasmic fibrils of the NPC implicated in nuclear protein import. Experimental data suggest that TPR is tethered to intranuclear filaments of the NPC by its coiled-coil domain, leaving the acidic COOH terminus free to interact with soluble transport factors and mediate export of macromolecules from the nucleus.

### REFERENCES

1. Byrd, D.A., et al. 1994. TPR, a large coiled-coil protein whose amino terminus is involved in activation of oncogenic kinases, is localized to the cytoplasmic surface of the nuclear pore complex. *J. Cell Biol.* 127: 1515-1526.
2. Bangs, P., et al. 1998. Functional analysis of TPR: identification of nuclear pore complex association and nuclear localization domains and a role in mRNA export. *J. Cell Biol.* 143: 1801-1812.
3. Cordes, V.C., et al. 1998. Molecular segments of protein TPR that confer nuclear targeting and association with the nuclear pore complex. *Exp. Cell Res.* 245: 43-56.
4. Krull, S., et al. 2004. Nucleoporins as components of the nuclear pore complex core structure and TPR as the architectural element of the nuclear basket. *Mol. Biol. Cell* 15: 4261-4277.
5. Beausoleil, S.A., et al. 2004. Large-scale characterization of HeLa cell nuclear phosphoproteins. *Proc. Natl. Acad. Sci. USA* 101: 12130-12135.

### CHROMOSOMAL LOCATION

Genetic locus: TPR (human) mapping to 1q31.1; Tpr (mouse) mapping to 1 G1.

### SOURCE

TPR (C-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of TPR 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-34363 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

### STORAGE

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

### APPLICATIONS

TPR (C-20) is recommended for detection of translocated promoter region of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

TPR (C-20) is also recommended for detection of translocated promoter region in additional species, including canine, bovine and porcine.

Suitable for use as control antibody for TPR siRNA (h): sc-45343, TPR siRNA (m): sc-45344, TPR shRNA Plasmid (h): sc-45343-SH, TPR shRNA Plasmid (m): sc-45344-SH, TPR shRNA (h) Lentiviral Particles: sc-45343-V and TPR shRNA (m) Lentiviral Particles: sc-45344-V.

Molecular Weight of TPR: 265-270 kDa.

Positive Controls: HeLa nuclear extract: sc-2120 or SK-N-MC cell lysate: sc-2237.

### 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) 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.

### RESEARCH USE

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

### PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.



Try **TPR (H-8): sc-271565** or **TPR (H-12): sc-271317**, our highly recommended monoclonal alternatives to TPR (C-20).