

# Tankyrase-2 (S-17): sc-22855

## BACKGROUND

Tankyrase-1 (TRF1-interacting ankyrin-related ADP-ribose polymerase 1) and the closely related homolog Tankyrase-2 are poly(ADP-ribose) polymerases (PARPs) that co-localize and use an ankyrin-repeat domain to bind diverse proteins, including TRF-1 (telomere-repeat-binding factor 1), IRAP (insulin-responsive aminopeptidase) and TAB182. Tankyrase-1 (also known as TNKS and TNKS1) and Tankyrase-2 (also known as TNKS2, TNKL and TANK2) interact with the same set of proteins and probably mediate overlapping functions, both at telomeres and in vesicular compartments. Overexpression of Tankyrase-1 in the nucleus promotes telomere elongation, suggesting that Tankyrase 1 may regulate access of telomerase to the telomeric complex. Overexpression of Tankyrase-2 in the nucleus releases endogenous TRF1 from telomeres, establishing Tankyrase-2 as a PARP with itself and TRF1 as acceptors of ADP-ribosylation, and suggesting the possibility of a role for Tankyrase-2 at telomeres. The ankyrin (ANK) domain of Tankyrase-2 comprises five subdomains that provide redundant binding sites for IRAP. Tankyrase-2 lacks the N-terminal Histidine/Proline/Serine-rich region of Tankyrase-1, but contains a corresponding ankyrin repeat region, sterile  $\alpha$  motif module and poly(ADP-ribose) polymerase homology domain. The gene encoding Tankyrase-2 is widely expressed, with mRNA transcripts particularly abundant in skeletal muscle and placenta.

## REFERENCES

- Lyons, R.J., et al. 2001. Identification of a novel human Tankyrase through its interaction with the adaptor protein Grb14. *J. Biol. Chem.* 276: 17172-17180.
- Kuimov, A.N., et al. 2001. Cloning and characterization of TNKL, a member of tankyrase gene family. *Genes Immun.* 2: 52-55.

## CHROMOSOMAL LOCATION

Genetic locus: TNKS2 (human) mapping to 10q23.32.

## SOURCE

Tankyrase-2 (S-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of Tankyrase 2 of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-22855 P, (100  $\mu$ g 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.

## RESEARCH USE

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

## APPLICATIONS

Tankyrase-2 (S-17) is recommended for detection of Tankyrase-2 of 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), 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).

Tankyrase-2 (S-17) is also recommended for detection of Tankyrase-2 in additional species, including equine, canine, bovine and porcine.

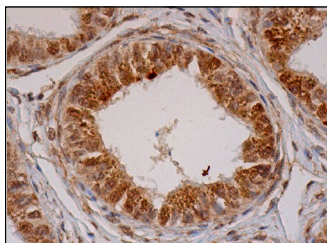
Suitable for use as control antibody for Tankyrase-2 siRNA (h): sc-44378, Tankyrase-2 shRNA Plasmid (h): sc-44378-SH and Tankyrase-2 shRNA (h) Lentiviral Particles: sc-44378-V.

Molecular Weight of Tankyrase-2: 130 kDa.

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

## DATA



Tankyrase-2 (S-17): sc-22855. Immunoperoxidase staining of formalin fixed, paraffin-embedded human epididymis tissue showing nuclear and cytoplasmic staining of glandular cells.

## PROTOCOLS

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

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Try **Tankyrase-1/2 (E-10): sc-365897**, our highly recommended monoclonal alternative to Tankyrase-2 (S-17).