

StAR (N-16): sc-23523

BACKGROUND

Steroidogenic acute regulatory (StAR) protein appears to mediate the rapid increase in pregnenolone synthesis stimulated by tropic hormones. StAR increases pregnenolone synthesis more than 4-fold and a major StAR transcript of 1.6 kb is found in ovary and testis. During ongoing growth and differentiation of the follicle of the ovary, the immunoreactivity of StAR tends to shift from the granulosa cells of early antral follicles to the theca cell layers in the adult. The first and rate-limiting step of steroidogenesis is the transfer of cholesterol from the outer mitochondrial membrane to the inner membrane where it is converted to pregnenolone by cytochrome P450 side-chain cleavage. This reaction is modulated in the gonads and adrenals by StAR, however, the mechanism used by StAR is not understood. This protein was isolated from a human adrenal cortex library and nonsense mutations in the StAR gene can cause lipoid congenital adrenal hyperplasia. The gene which encodes StAR maps to human chromosome 8p11.23.

CHROMOSOMAL LOCATION

Genetic locus: STAR (human) mapping to 8p11.23; Star (mouse) mapping to 8 A2.

SOURCE

StAR (N-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of StAR 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-23523 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

StAR (N-16) is recommended for detection of StAR 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).

StAR (N-16) is also recommended for detection of StAR in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for StAR siRNA (h): sc-44121, StAR siRNA (m): sc-153878, StAR shRNA Plasmid (h): sc-44121-SH, StAR shRNA Plasmid (m): sc-153878-SH, StAR shRNA (h) Lentiviral Particles: sc-44121-V and StAR shRNA (m) Lentiviral Particles: sc-153878-V.

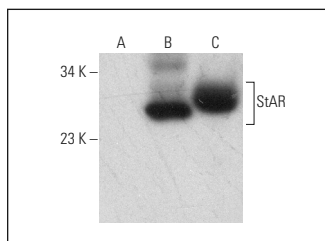
Molecular Weight of StAR: 30 kDa.

Positive Controls: StAR (h): 293T Lysate: sc-170083 or rat adrenal gland extract: sc-364802.

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



StAR (N-16): sc-23523. Western blot analysis of StAR expression in non-transfected: sc-117752 (A) and human StAR transfected: sc-170083 (B) 293T whole cell lysates and rat adrenal gland tissue extract (C).

SELECT PRODUCT CITATIONS

- Morales, A., et al. 2008. Differential expression of steroidogenic factors 1 and 2, cytochrome p450_{scc}, and steroidogenic acute regulatory protein in human pancreas. *Pancreas* 37: 165-169.
- Fukushima, M., et al. 2011. Gonadotropin-regulated testicular RNA helicase (GRTH/DDX25), a negative regulator of luteinizing/chorionic gonadotropin hormone-induced steroidogenesis in Leydig cells: central role of steroidogenic acute regulatory protein (StAR). *J. Biol. Chem.* 286: 29932-29940.

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 **StAR (D-2): sc-166821**, our highly recommended monoclonal alternative to StAR (N-16).