

StAR (K-20): sc-23524

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.

REFERENCES

1. Sugawara, T., et al. 1995. Human steroidogenic acute regulatory protein: functional activity in COS-1 cells, tissue-specific expression, and mapping of the structural gene to 8p11.2 and a pseudogene to chromosome 13. *Proc. Natl. Acad. Sci. USA* 92: 4778-4782.
2. Lin, D., Sugawara, et al. 1995. Role of steroidogenic acute regulatory protein in adrenal and gonadal steroidogenesis. *Science* 267: 1828-1831.
3. Thompson, W.E., et al. 1999. Immunolocalization and expression of the steroidogenic acute regulatory protein during the transitional stages of rat follicular differentiation. *J. Histochem. Cytochem.* 47: 769-7676.
4. Online Mendelian Inheritance in Man, OMIM[™]. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 600617. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
5. Thomson, M. 2003 Does cholesterol use the mitochondrial contact site as a conduit to the steroidogenic pathway? *Bioessays* 25: 252-258.

CHROMOSOMAL LOCATION

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

SOURCE

StAR (K-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus 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-23524 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

StAR (K-20) 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), 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).

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

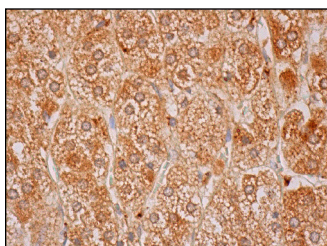
Suitable for use as control antibody for StAR siRNA (h): sc-44121, StAR siRNA (m): sc-153878, StAR shRNA Plasmid (h): sc-44121-SH, StAR shRNA Plasmid (m): sc-153878-SH, StAR shRNA (h) Lentiviral Particles: sc-44121-V and StAR shRNA (m) Lentiviral Particles: sc-153878-V.

Molecular Weight of StAR: 30 kDa.

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 Biotto 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



StAR (K-20): sc-23524. Immunoperoxidase staining of formalin fixed, paraffin-embedded human adrenal gland tissue showing cytoplasmic staining of glandular cells.

RESEARCH USE

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


 MONOS
 Satisfation
 Guaranteed

Try **StAR (D-2): sc-166821**, our highly recommended monoclonal alternative to StAR (K-20).