

STARS (E-9): sc-393062

BACKGROUND

STARS (striated muscle activator of Rho-dependent signaling), also known as ABRA (Actin-binding Rho-activating protein), is a 381 amino acid cytoplasmic protein. STARS localizes to the cytoskeleton, specifically, the I-band of the sarcomere and the sarcomeric structure between Z-lines, to a lesser extent. STARS is an activator of serum response factor (SRF)-dependent transcription, either by a mechanism requiring Rho-Actin signaling or inducing nuclear translocation of MRTF-A or MRTF-B. STARS has been found to interact with ABLIM1, ABLIM2, ABLIM3. The gene that encodes STARS maps to human chromosome 8, which is made up of nearly 146 million bases and encodes about 800 genes.

REFERENCES

1. Wildenauer, D.B. and Schwab, S.G. 1999. Chromosomes 8 and 10 workshop. *Am. J. Med. Genet.* 88: 239-243.
2. Arai, A., et al. 2002. STARS, a striated muscle activator of Rho signaling and serum response factor-dependent transcription. *J. Biol. Chem.* 277: 24453-24459.
3. Kuwahara, K., et al. 2005. Muscle-specific signaling mechanism that links Actin dynamics to serum response factor. *Mol. Cell. Biol.* 25: 3173-3181.
4. Nusbaum, C., et al. 2006. DNA sequence and analysis of human chromosome 8. *Nature* 439: 331-335.
5. Kuwahara, K., et al. 2007. Modulation of adverse cardiac remodeling by STARS, a mediator of MEF2 signaling and SRF activity. *J. Clin. Invest.* 117: 1324-1334.
6. Lamon, S., et al. 2009. Regulation of STARS and its downstream targets suggest a novel pathway involved in human skeletal muscle hypertrophy and atrophy. *J. Physiol.* 587: 1795-1803.

CHROMOSOMAL LOCATION

Genetic locus: ABRA (human) mapping to 8q23.1.

SOURCE

STARS (E-9) is a mouse monoclonal antibody raised against amino acids 82-381 mapping at the C-terminus of STARS of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STARS (E-9) is available conjugated to agarose (sc-393062 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-393062 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-393062 PE), fluorescein (sc-393062 FITC), Alexa Fluor® 488 (sc-393062 AF488), Alexa Fluor® 546 (sc-393062 AF546), Alexa Fluor® 594 (sc-393062 AF594) or Alexa Fluor® 647 (sc-393062 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-393062 AF680) or Alexa Fluor® 790 (sc-393062 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

STARS (E-9) is recommended for detection of STARS of human origin by Western Blotting (starting dilution 1:100, 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).

Suitable for use as control antibody for STARS siRNA (h): sc-77702, STARS shRNA Plasmid (h): sc-77702-SH and STARS shRNA (h) Lentiviral Particles: sc-77702-V.

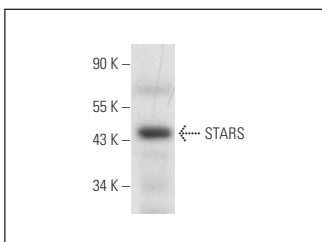
Molecular Weight of STARS: 43 kDa.

Positive Controls: human skeletal muscle extract: sc-363776.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



STARS (E-9): sc-393062. Western blot analysis of STARS expression in human skeletal muscle tissue extract.

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.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.