

TXA synthase (C-19): sc-79181

BACKGROUND

TXA synthase, also referred to as thromboxane synthase or CYP5, is an enzyme that catalyzes the conversion of the prostaglandin endoperoxide (PGH₂) into Thromboxane A₂, a potent vasoconstrictor and inducer of platelet aggregation. TXA synthase is an important part of the cytochrome P450 system. Thromboxane A₂ plays a pivotal role in the maintenance of hemostasis and cardiovascular diseases along with Prostacyclin. The expression of TXA synthase has been found to be consistently upregulated in several types of cancer tissues suggesting the involvement of this enzyme in tumor growth in humans. Thromboxanes are produced by TXA synthase in excess in inflammatory bowel disease.

REFERENCES

- Chase, M.B., Baek, S.J., Purtell, D.C., Schwartz, S. and Shen, R.F. 1993. Mapping of the human thromboxane synthase gene (TBXAS1) to chromosome 7q34-q35 by two-color fluorescence *in situ* hybridization. *Genomics* 16: 771-773.
- Miyata, A., Yokoyama, C., Ihara, H., Bandoh, S., Takeda, O., Takahashi, E. and Tanabe, T. 1994. Characterization of the human gene (TBXAS1) encoding thromboxane synthase. *Eur. J. Biochem.* 224: 273-279.
- Baek, S.J., Lee, K.D. and Shen, R.F. 1996. Genomic structure and polymorphism of the human thromboxane synthase-encoding gene. *Gene* 173: 251-256.
- Zhang, L., Xiao, H., Schultz, R.A. and Shen, R.F. 1997. Genomic organization, chromosomal localization and expression of the murine thromboxane synthase gene. *Genomics* 45: 519-528.
- Galipeau, D., Arikawa, E., Sekirov, I. and McNeill, J.H. 2001. Chronic thromboxane synthase inhibition prevents fructose-induced hypertension. *Hypertension* 38: 872-876.
- Carty, E., Nickols, C., Feakins, R.M. and Rampton, D.S. 2002. Thromboxane synthase immunohistochemistry in inflammatory bowel disease. *J. Clin. Pathol.* 55: 367-370.
- Hsu, P.Y. and Wang, L.H. 2003. Protein engineering of thromboxane synthase: conversion of membrane-bound to soluble form. *Arch. Biochem. Biophys.* 416: 38-46.
- Husted, D., Upshaw, J., Gridley, K.E. and Wood, C.E. 2003. Cellular localization of thromboxane synthase in ovine spinal cord and hindbrain. *Brain Res.* 971: 107-115.

CHROMOSOMAL LOCATION

Genetic locus: TBXAS1 (human) mapping to 7q34; Tbxas1 (mouse) mapping to 6 B1.

SOURCE

TXA synthase (C-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of TXA synthase 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-79181 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

TXA synthase (C-19) is recommended for detection of TXA synthase 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).

TXA synthase (C-19) is also recommended for detection of TXA synthase in additional species, including equine, canine and bovine.

Suitable for use as control antibody for TXA synthase siRNA (h): sc-62451, TXA synthase siRNA (m): sc-76779, TXA synthase shRNA Plasmid (h): sc-62451-SH, TXA synthase shRNA Plasmid (m): sc-76779-SH, TXA synthase shRNA (h) Lentiviral Particles: sc-62451-V and TXA synthase shRNA (m) Lentiviral Particles: sc-76779-V.

Molecular Weight of TXA synthase: 60.5 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.

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 or our catalog for detailed protocols and support products.


 MONOS
 Satisfaction
 Guaranteed

Try **TXA synthase (Tü-300): sc-59395**, our highly recommended monoclonal alternative to TXA synthase (C-19).