

# TXA2R (T-20): sc-18377

## BACKGROUND

Thromboxane A2 (TXA2), the major cyclooxygenase (COX) product of arachidonic acid, stimulates platelet aggregation and is a potent vasoconstrictor. TXA2R has been implicated in several processes in normal kidney physiology as well as in myocardial infarction, atherosclerosis and bronchial asthma. TXA2 mediates its effects through the TXA2 receptor (TXA2R), a G protein-coupled receptor that activates phospholipase C (PLC) to mobilize intracellular calcium stores. Alternatively, TXA2R activates the MAP kinase pathway in response to dibutyl cyclic AMP (dbcAMP). The human TXA2R gene maps to chromosome 19p13.3 and is alternatively spliced to produce proteins which differ in the carboxy-termini. TXA2R is expressed in platelets, endothelium, placenta, vascular smooth muscles and the renal cortex. Mutations in the gene encoding TXA2R lead to several bleeding disorders due to either impaired coupling between the receptor and PLC or impaired binding to TXA2. Also, the TXA2R protein may be involved in mediating renal damage in disease states, controlling the initiation and/or progression of labor in women, and providing therapeutic value for treatment of acute pancreatitis.

## CHROMOSOMAL LOCATION

Genetic locus: TBXA2R (human) mapping to 19p13.3.

## SOURCE

TXA2R (T-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of TXA2R 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-18377 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## RESEARCH USE

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

## APPLICATIONS

TXA2R (T-20) is recommended for detection of TXA2R long and short isoforms of 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).

TXA2R (T-20) is also recommended for detection of TXA2R long and short isoforms in additional species, including canine and bovine.

Suitable for use as control antibody for TXA2R siRNA (h): sc-40226, TXA2R shRNA Plasmid (h): sc-40226-SH and TXA2R shRNA (h) Lentiviral Particles: sc-40226-V.

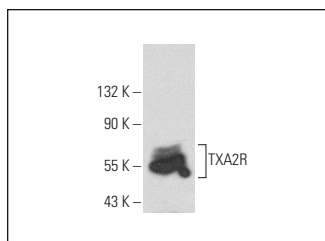
Molecular Weight of TXA2R: 55/58 kDa.

Positive Controls: JEG-3 whole cell lysate: sc-364255, ECV304 cell lysate: sc-2269 or HUV-EC-C whole cell lysate: sc-364180.

## 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



TXA2R (T-20): sc-18377. Western blot analysis of TXA2R expression in ECV304 whole cell lysate.

## SELECT PRODUCT CITATIONS

1. Yousefipour, Z., et al. 2007. Ciglitazone, a peroxisome proliferator-activated receptor  $\gamma$  inducer, ameliorates renal preglomerular production and activity of angiotensin II and thromboxane A2 in glycerol-induced acute renal failure. *J. Pharmacol. Exp. Ther.* 322: 461-468.
2. Mumford, A.D., et al. 2013. Platelet dysfunction associated with the novel Trp29Cys thromboxane A2 receptor variant. *J. Thromb. Haemost.* 11: 547-554.

## STORAGE

Store at 4° C, \*\*DO NOT FREEZE\*\*. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## PROTOCOLS

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



Try **TXA2R (G-2): sc-515033**, our highly recommended monoclonal alternative to TXA2R (T-20).