

# TXA2R (H-120): sc-30036

## 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.

## REFERENCES

- Swanson, M.L., et al. 1992. The expression of thromboxane A2 synthase and thromboxane A2 receptor gene in human uterus. *Biol. Reprod.* 47: 105-117.
- Reilly, M., et al. 1993. Cellular activation by thromboxane A2 and other eicosanoids. *Eur. Heart J.* 14: 88-93.
- Nusing, R.M., et al. 1993. Characterization and chromosomal mapping of the human thromboxane A2 receptor gene. *J. Biol. Chem.* 268: 25253-25259.
- Raychowdhury, M.K., et al. 1994. Alternative splicing produces a divergent cytoplasmic tail in the human endothelial thromboxane A2 receptor. *J. Biol. Chem.* 269: 19256-19261.
- Hirata, T., et al. 1996. Two thromboxane A2 receptor isoforms in human platelets. Opposite coupling to adenylyl cyclase with different sensitivity to Arg60 to Leu mutation. *J. Clin. Invest.* 97: 949-956.

## CHROMOSOMAL LOCATION

Genetic locus: TBXA2R (human) mapping to 19p13.3; Tbx2r (mouse) mapping to 10 C1.

## SOURCE

TXA2R (H-120) is a rabbit polyclonal antibody raised against amino acids 1-120 mapping at the N-terminus 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.

## STORAGE

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

## APPLICATIONS

TXA2R (H-120) is recommended for detection of TXA2R long and short isoforms 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).

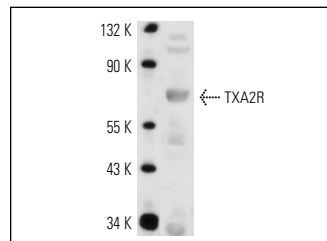
TXA2R (H-120) is also recommended for detection of TXA2R long and short isoforms in additional species, including bovine.

Suitable for use as control antibody for TXA2R siRNA (h): sc-40226, TXA2R siRNA (m): sc-154816, TXA2R shRNA Plasmid (h): sc-40226-SH, TXA2R shRNA Plasmid (m): sc-154816-SH, TXA2R shRNA (h) Lentiviral Particles: sc-40226-V and TXA2R shRNA (m) Lentiviral Particles: sc-154816-V.

Molecular Weight of TXA2R: 55/58 kDa.

Positive Controls: AN3 CA cell lysate: sc-24662.

## DATA



TXA2R (H-120): sc-30036. Western blot analysis of TXA2R expression in platelet extract.

## SELECT PRODUCT CITATIONS

- Nie, D., et al. 2008. Thromboxane A2 receptors in prostate carcinoma: expression and its role in regulating cell motility via small GTPase Rho. *Cancer Res.* 68: 115-121.
- Novella, S., et al. 2010. Gathering of aging and estrogen withdrawal in vascular dysfunction of senescent accelerated mice. *Exp. Gerontol.* 45: 868-874.
- Mumford, A.D., et al. 2013. Platelet dysfunction associated with the novel Trp29Cys thromboxane A2 receptor variant. *J. Thromb. Haemost.* 11: 547-554.

## RESEARCH USE

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

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Try **TXA2R (G-2): sc-515033**, our highly recommended monoclonal alternative to TXA2R (H-120).