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# Product Information



## TP Receptor (human) Blocking Peptide

Item No. 10009368

Thromboxane A<sub>2</sub> (TXA<sub>2</sub>) is a potent vasoconstrictor and activator of platelet aggregation. The short half-life of TXA<sub>2</sub> ensures local action whether generated by vascular endothelial cells or by platelets and confers physiologically beneficial or deleterious effects under inflammatory situations.<sup>1,2</sup> TXA<sub>2</sub> elicits its effects *via* a 7-transmembrane domain G-protein coupled receptor, the TP receptor.<sup>3</sup> This receptor can also bind prostaglandin H<sub>2</sub> and isoprostanes and was first cloned from human placenta and the platelet-like MEG-01 cell line.<sup>4,5</sup> The TP receptor is highly expressed in platelets and is relatively less abundant in tissues such as lung, kidney, brain, spleen, thymus, monocytes, uterus, and placenta.<sup>3,6-9</sup> The apparent molecular weight for TP receptors has been reported from 37 kDa to 70 kDa depending on different degrees of glycosylation.<sup>9-11</sup> However, Cayman's antibody consistently detects the TP receptor at 55 and 64 kDa in platelets, kidney, and Cos-7 cell samples.

### Laboratory Procedures

This vial contains 200 µg of peptide in 200 µl TBS, pH 7.4, containing 0.1% BSA and 0.02% sodium azide. The TP Receptor (human) blocking peptide (amino acids 323-343) can be used in conjunction with Cayman's TP Receptor (human) Polyclonal Antibody (Item No. 10004452) to block protein-antibody complex formation during immunochemical analysis of TP receptor.

Store this peptide solution at -20°C. It will be stable for at least one year. To block antibody/protein complex formation, the following procedure is recommended:

1. Mix the TP Receptor (human) Polyclonal Antibody (Item No. 10004452) and blocking peptide together in a 1:1 (v/v) ratio in a microfuge tube. For example, mix 40 µl of antibody and 40 µl of peptide.\*
2. Incubate for one hour at room temperature with occasional mixing prior to further dilution and application of the mixture to the immunoblot.
3. Dilute the mixture to the final working antibody concentration and apply to the slide or membrane as usual.

\*This is a recommended mixture. The minimum amount of peptide needed for complete blocking has not been precisely determined and may vary depending on the sample being analyzed. The amount of peptide required may need to be increased if sufficient blocking does not occur.

### References

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**WARNING: THIS PRODUCT IS FOR LABORATORY RESEARCH ONLY. NOT FOR ADMINISTRATION TO HUMANS. NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.**

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