



# SZABO SCANDIC

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## Produktinformation



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# PRODUCT INFORMATION



## Guanylate Cyclase $\alpha$ subunit (soluble) Blocking Peptide

Item No. 360895

### Overview and Properties

<b>Contents:</b>	This vial contains 200 $\mu$ g of lyophilized peptide.
<b>Synonym:</b>	sGC $\alpha_1$ subunit
<b>Storage:</b>	-20°C (as supplied)
<b>Stability:</b>	As supplied, 1 year from the QC date provided on the Certificate of Analysis, when stored properly

### Procedures:

Reconstitute the peptide with 200  $\mu$ l of distilled water prior to use and make 20-50  $\mu$ l aliquots if needed for future use. The guanylate cyclase  $\alpha$  subunit (soluble) blocking peptide can be used in conjunction with Cayman's Guanylate Cyclase  $\alpha$  subunit (soluble) Polyclonal Antibody (Item No. 160895) to block protein-antibody complex formation during immunochemical analysis of guanylate cyclase.

Reconstitute the lyophilized peptide with 200  $\mu$ l of PBS or distilled water. To block antibody/protein complex formation, the following procedure is recommended:

1. Mix the guanylate cyclase  $\alpha$  subunit (soluble) polyclonal antibody (Item No. 160895) and blocking peptide together in a 1:1 (v/v) ratio in a microfuge tube. For example, mix 20  $\mu$ l of antibody and 20  $\mu$ l 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.

### Description

Soluble guanylate cyclase is a heterodimeric enzyme, composed of  $\alpha$  and  $\beta$  subunits, that synthesizes cGMP from GTP. The enzyme is activated by the binding of nitric oxide or carbon monoxide to the heme group of the enzyme.<sup>1</sup> Chronic hypoxia upregulates soluble guanylate expression in rat lung.<sup>2</sup> The  $\alpha_1$  subunit contains 690-717 amino acids and has a molecular mass of 77-82 kDa.<sup>3-5</sup> The cloned  $\beta_1$  subunit of guanylate cyclase from human, bovine, and rat sources contains 619 amino acids and has a molecular mass of approximately 70,000.<sup>4,6,7</sup>

### References

1. Stone, J.R. and Marletta, M.A. *Biochemistry* **33**, 5636-5640 (1994).
2. Li, D., Zhou, N., and Johns, R.A. *Am. J. Physiol.* **277**, 841-847 (1999).
3. Giulli, G., Scholl, U., Bulle, F., et al. *FEBS Lett.* **304**, 83-88 (1992).
4. Nakane, M., Arai, K., Saheki, S., et al. *J. Biol. Chem.* **265**, 16841-16845 (1990).
5. Koesling, D., Harteneck, C., Humbert, P., et al. *FEBS Lett.* **266**, 128-132 (1990).
6. Koesling, D., Herz, J., Gausepohl, H., et al. *FEBS Lett.* **239**, 29-34 (1988).
7. Nakane, M., Saheki, S., Kuno, T., et al. *Biochem. Biophys. Res. Commun.* **157**, 1139-1147 (1988).

WARNING  
THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA  
This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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