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# PRODUCT INFORMATION



## HIF-1 $\alpha$ (C-Term) Blocking Peptide

Item No. 300003

### Overview and Properties

<b>Contents:</b>	This vial contains 200 $\mu$ g of lyophilized HIF-1 $\alpha$ (C-Term) blocking peptide.
<b>Synonyms:</b>	ARNT-interacting Protein, Hypoxia-Inducible Factor-1 $\alpha$
<b>Storage:</b>	-20°C (as supplied)
<b>Stability:</b>	$\geq$ 2 years

### Procedures

Hypoxia-inducible factor-1 $\alpha$  (HIF-1 $\alpha$ ) (C-Term) Blocking Peptide is identical to the carboxy-termini of most mammalian HIF-1 $\alpha$  proteins and is very similar to HIF-1 $\alpha$  from other vertebrates (frogs, birds, and fish). This control peptide can be used for negative control experiments in conjunction with Cayman's HIF-1 $\alpha$  (C-Term) Polyclonal Antibody (Item No. 10006421) to block protein-antibody complex formation during immunochemical analysis of HIF-1 $\alpha$ .

Reconstitute the lyophilized peptide with 200  $\mu$ l of PBS or distilled water. Store this peptide solution at -20°C. To block antibody/protein complex formation, the following procedure is recommended:

1. Mix the HIF-1 $\alpha$  (C-Term) Polyclonal Antibody (Item No. 10006421) 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

HIF-1 $\alpha$  is a transcription factor that accumulates under low-oxygen conditions.<sup>1,2</sup> Following hypoxic stimulus and cytoplasmic accumulation, HIF-1 $\alpha$  migrates to the nucleus where, with other transcription factors, it drives the production of stress-adaptive proteins. This response is essential for maintenance of normal oxidative physiology, however HIF-1 $\alpha$  overexpression in cancer cells promotes tumor survival.<sup>2-6</sup> HIF-1 $\alpha$  is an EPAS-1 family member with phosphorylation dependent activities. HIF-1 $\alpha$  will migrate to the apparent molecular weights of 110-125 kDa (by SDS-PAGE) depending on phosphorylation status.<sup>7,8</sup>

### References

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3. Talks, K.L., Turley, H., Gatter, K.C., et al. *Am. J. Pathol.* **157**(2), 411-421 (2000).
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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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