

PRODUCT INFORMATION



Doppel Blocking Peptide

Item No. 10005516

Overview and Properties

Contents:	This vial contains 200 µg of peptide.
Storage:	-20°C (as supplied)
Storage Buffer:	TBS, pH 7.4, containing 0.1% BSA and 0.02% sodium azide
Stability:	≥3 years

Description

Doppel is a homolog of the cellular prion protein. Like prion protein, doppel has two N-linked oligosaccharides, and is presented on the cell surface via a glycosylphosphatidylinositol anchor.¹ Unlike prion protein, it lacks the conformationally plastic and octapeptide repeat domains.² The primary physiological role of doppel remains to be determined, but there is some evidence suggesting that cell surface prion protein can antagonize the toxic effect of doppel expressed in the central nervous system.¹ In addition, the protein may play a major role in human male fertility, given its expression on both sertoli cells and spermatozoa.³ Doppel is differentially glycosylated, causing it to migrate at multiple sizes on SDS-PAGE.¹ Cayman's doppel polyclonal antibody detects doppel at 33 kDa from murine and rat brain homogenates and human cerebellar cortex. Additionally the nonglycosylated (19 kDa) and monoglycosylated (25 kDa) doppel is detected from mouse spleen.

Procedures

This vial contains 200 µg peptide in 200 µl TBS, pH 7.4, containing 0.1% BSA and 0.02% sodium azide. The doppel blocking peptide (amino acids 112-120) can be used in conjunction with Cayman's Doppel Polyclonal Antibody (Item No. 10005517) to block protein-antibody complex formation during immunochemical analysis of doppel protein.

To block antibody/protein complex formation, the following procedure is recommended:

1. Mix the Doppel Polyclonal Antibody (Item No. 10005517) and blocking peptide together in a 2:1 (v/v) ratio in a microfuge tube. For example, mix 40 µl of antibody and 20 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

1. Silverman, G.L., Qin, K., Moore, R.C., *et al.* Doppel is an N-glycosylated, glycosylphosphatidylinositol-anchored protein. Expression in testis and ectopic production in the brains of Prnp^{0/0} mice predisposed to purkinje cell loss. *J. Biol. Chem.* **275**(35), 26834-26841 (2000).
2. Mastrangelo, P. and Westaway, D. The prion gene complex encoding PrP^c and Doppel: Insights from mutational analysis. *Gene* **275**, 1-18 (2001).
3. Peoc'h, K., Serres, C., Frobert, Y., *et al.* The human 'prion-like' protein doppel is expressed in both sertoli cells and spermatozoa. *J. Biol. Chem.* **277**(45), 43071-43078 (2002).

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.

WARRANTY AND LIMITATION OF REMEDY
Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

Copyright Cayman Chemical Company, 10/12/2023

CAYMAN CHEMICAL
1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA
PHONE: [800] 364-9897
[734] 971-3335
FAX: [734] 971-3640
CUSTSERV@CAYMANCHEM.COM
WWW.CAYMANCHEM.COM