# Streptavidin-HRP

#3999 Store at -20°C

☑ 1 ml

Cell Signaling TECHNOLOGY®

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**For Research Use Only. Not For Use In Diagnostic Procedures.**

| Applications | Species Cross-Reactivity |
|---|---|
| W | All |

**Description:** This Cell Signaling Technology product is useful for the detection of biotinylated proteins (1,2). Conjugation of horseradish peroxidase (HRP) to streptavidin is obtained by cross linking the amino groups on streptavidin with the carbohydrate groups on HRP.

**Background:** Streptavidin is a 53 kDa homotetramer isolated from *Streptomyces avidinii* for use in isolation and detection bioassays (3). Each streptavidin subunit forms high affinity non-covalent bonds with the vitamin biotin. Because of its strong non-covalent interaction with biotin, streptavidin can be used to detect and isolate biotinylated proteins (1,2).

Chemiluminescent detection systems have emerged as the best all-around detection method for use with western blots and ELISA. These detection assays eliminate the hazards associated with radioactive materials and toxic chromogenic substrates. The speed and sensitivity of these methods are unequalled by traditional alternatives. Streptavidin-HRP is used with biotinylated proteins and specific chemiluminescent substrates to generate light signal. Streptavidin-HRP conjugates have a very high turnover rate, coupling high sensitivity with short reaction times

**Specificity/Sensitivity:** Streptavidin has a remarkably high affinity for its natural ligand, biotin. The complex and irregular structure of the biotin-binding site makes it highly optimized for biotin binding and confers great specificity to the streptavidin-biotin complexes (4).

**Source/Purification:** Streptavidin-HRP is purified by gel filtration. The conjugate product is free from unconjugated streptavidin and HRP.

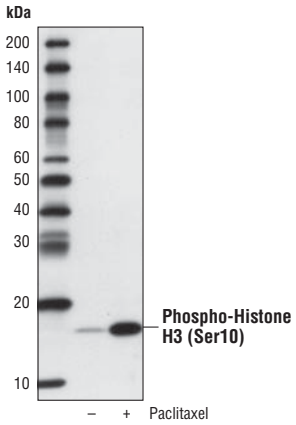
**Background References:**

(1) Updyke, T.V. and Nicolson, G.L. (1984) *J Immunol Methods* 73, 83–95.

(2) Buckie, J.W. and Cook, G.M. (1986) *Anal Biochem* 156, 463–72.

(3) Chaiet, L. and Wolf, F.J. (1964) *Arch Biochem Biophys* 106, 1–5.

(4) Reznik, G.O. et al. (1998) *Proc Natl Acad Sci USA* 95, 13525–30.




*Western blot analysis of extracts from HeLa cells, untreated or treated with Paclitaxel #9807, using Phospho-Histone H3 (Ser10) (D2C8) Rabbit mAb (Biotinylated) #3642 and Streptavidin-HRP #3999 for detection.*

**Swiss-Prot Acc.** #P22629

**Storage:** Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 2 mg/ml bovine serum albumin (BSA) and 50% glycerol. Store at –20°C.

**Recommended Antibody Dilutions:**

| | |
|---|---|
| Western blotting | 1:2000 |

**For application specific protocols please see the web page for this product at www.cellsignal.com.**

**Please visit www.cellsignal.com for a complete listing of recommended companion products.**

**IMPORTANT: Dilute Streptavidin-HRP in 5% nonfat dry milk, 1X TBS, 0.1% Tween 20. Incubate for 1 hour at room temperature shaking.**

**Applications Key:** **W**—Western **IP**—Immunoprecipitation **IHC**—Immunohistochemistry **ChIP**—Chromatin Immunoprecipitation **IF**—Immunofluorescence **F**—Flow cytometry **E-P**—ELISA-Peptide

**Species Cross-Reactivity Key:** **H**—human **M**—mouse **R**—rat **Hm**—hamster **Mk**—monkey **Mi**—mink **C**—chicken **Dm**—D. melanogaster **X**—Xenopus **Z**—zebrafish **B**—bovine **Dg**—dog **Pg**—pig **Sc**—S. cerevisiae **Ce**—C. elegans **Hr**—Horse **All**—all species expected