

Datasheet for A003-03**Avidin Peroxidase Conjugated****Overview**

Description:	Avidin Peroxidase Conjugated - A003-03
Item No.:	A003-03
Size:	2 mg
Applications:	WB

Product Details

Background:	Avidin is a biotin-binding protein found in the oviducts of egg-laying animals (birds, reptiles, and frogs) that gets deposited into the whites of their eggs. Avidin is a tetramer and can bind up to four biotin molecules (Vitamin B7) with one of the greatest known non-covalent interactions. Avidity for biotin is destroyed with heat. Horseradish Peroxidase (HRP) is an enzyme that utilizes organic peroxide compounds as electron donors. Horseradish Peroxidase naturally provides protection for plants against pathogens, but can be utilized in molecular biology to convert various substrates to detectable compounds (such as in Western Blotting and ELISAs). Avidin Peroxidase Conjugated is ideal for investigators in Immunology, Cancer, Neuroscience, and Cell Biology.
Synonyms:	HRP-Avidin conjugated, Horseradish peroxidase conjugated Avidin, AvD, HRP Avidin Biotin Complex, Avidin Peroxidase Conjugated, Avidin HRP Conjugated
Conjugate:	Peroxidase (HRP)

Target Details

Purity/Specificity:	Avidin Peroxidase Conjugated was prepared from chromatographically pure avidin isolated from egg white followed by extensive dialysis against the buffer stated above. Avidin Peroxidase Conjugated assayed by immunoelectrophoresis resulted in a single precipitin arc against anti-Avidin and anti-Peroxidase.
Relevant Links:	• UniProtKB - P02701 • A003-03 SDS

Application Details

Suggested Applications:	WB (Based on references)
Application Note:	Avidin Peroxidase Conjugated is a useful detection reagent for primary antibodies conjugated to biotin. Avidin Peroxidase Conjugated can be utilized in both Western Blotting and ELISA experiment formats in combination with the proper substrate (TMB-1000 or FEMTOMAX-110).
Assay Dilutions:	All assays should be optimized by the user. Recommended dilutions (if any) may be listed below.
ELISA:	1:20,000 - 1:200,000
IHC:	1:1,000 - 1:5,000
WB:	1:10,000 - 1:40,000

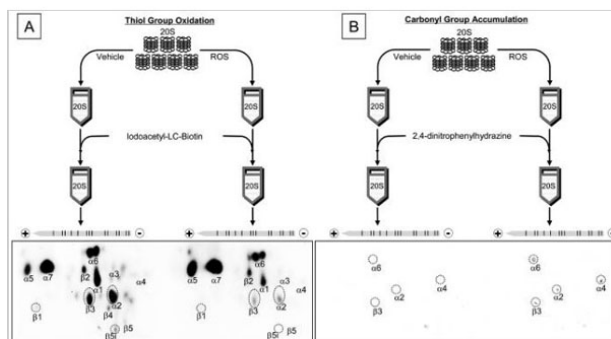
Formulation

Physical State:	Lyophilized
Concentration:	2.0 mg/mL by UV absorbance at 280 nm
Buffer:	0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2
Preservative:	0.01% (w/v) Gentamicin Sulfate. Do NOT add Sodium Azide!
Stabilizer:	10 mg/mL Bovine Serum Albumin (BSA) - Immunoglobulin and Protease free
Reconstitution Volume:	1.0 mL
Reconstitution Buffer:	Restore with deionized water (or equivalent)

Shipping & Handling

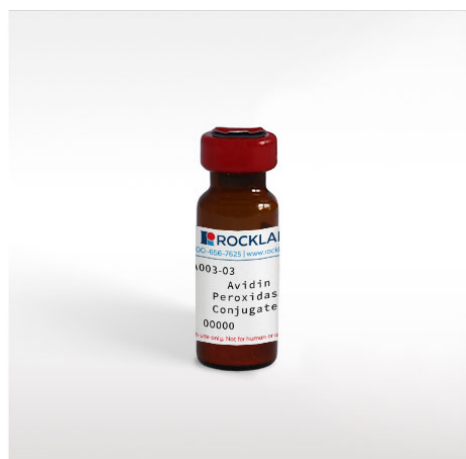
Shipping Condition:	Ambient
Storage Condition:	Store vial at 4° C prior to restoration. For extended storage aliquot contents and freeze at -20° C or below. Avoid cycles of freezing and thawing. Centrifuge product if not completely clear after standing at room temperature. Avidin Peroxidase Conjugated is stable for several weeks at 4° C as an undiluted liquid. Dilute only prior to immediate use.
Expiration:	Expiration date is one (1) year from date of receipt.

Images



Western Blot

Detection of 20S Proteasome Subunits Modified by Reactive Oxygen Species after 2-DE. Images were taken from a study on a differential analysis of ROS sensitive 20S proteasome subunits, which were characterized using biotin-conjugated chemical reagents to visualize the degree of oxidation. A) Free thiol groups of murine 20S proteasome subunits were conjugated with iodoacetyl-LC-Biotin and probed with avidin-HRP. In this indirect assay, diminishing signal indicates an increasing level of oxidation. Parallel detection of free thiol groups in vehicle and ROS treated murine proteasome complexes demonstrated that the $\alpha 2$, $\beta 1$, $\beta 3$ and $\beta 5$ subunits were oxidized at higher levels after ROS treatment. B) In parallel experiments, carbonylation was visualized by derivatization with 2,4-dinitrophenylhydrazine (DNPH) and probed with an anti-DNP antibody. In this direct assay, the increasing signal indicates higher levels of oxidation. Increased carbonyl modification of 20S proteasome subunits was detected for $\alpha 2$, $\alpha 4$, $\alpha 6$ and $\beta 3$ after ROS treatment. Figure 4. PMID: 19003867.



Bottle

Avidin Peroxidase Conjugated

References

- Loch CM et al. A microarray of ubiquitylated proteins for profiling deubiquitylase activity reveals the critical roles of both chain and substrate. *Biochim Biophys Acta*. (2012)
- Zong, C. et al. Two-dimensional electrophoresis-based characterization of post-translational modifications of mammalian 20S proteasome complexes. *Proteomics* (2008)

Disclaimer

This product is for research use only and is not intended for therapeutic or diagnostic applications. Please contact a technical service representative for more information. All products of animal origin manufactured by Rockland Immunochemicals are derived from starting materials of North American origin. Collection was performed in United States Department of Agriculture (USDA) inspected facilities and all materials have been inspected and certified to be free of disease and suitable for exportation. All properties listed are typical characteristics and are not specifications. All suggestions and data are offered in good faith but without guarantee as conditions and methods of use of our products are beyond our control. All claims must be made within 30 days following the date of delivery. The prospective user must determine the suitability of our materials before adopting them on a commercial scale. Suggested uses of our products are not recommendations to use our products in violation of any patent or as a license under any patent of Rockland Immunochemicals, Inc. If you require a commercial license to use this material and do not have one, then return this material, unopened to: Rockland Inc., P.O. BOX 5199, Limerick, Pennsylvania, USA.