

Datasheet for A003-01**Avidin****Overview**

Description:	Avidin - A003-01
Item No.:	A003-01
Size:	10 mg
Applications:	SDS-PAGE, Microarray, Other

Product Details

Background:	Avidin is 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.
Synonyms:	avidin, AVD
Specific Activity:	14.4 U/mg by biotin titration method

Target Details

Purity/Specificity:	Avidin was prepared from chromatographically purified avidin isolated from egg white followed by extensive dialysis against the buffer stated above. Avidin was assayed by immunoelectrophoresis resulted in a single precipitin arc against anti-Avidin. No reaction was observed against anti-Streptavidin.
Relevant Links:	• GeneID - 396260 • NCBI - CAC34569.1 • UniProtKB - P02701 • SDS

Application Details

Tested Applications:	SDS-PAGE
Suggested Applications:	Microarray, Other (Based on references)

Application Note: Avidin has been tested by SDS-PAGE and is suitable for use as antigen, as a control or standard in assays, and most other immunological methods as well as enzyme conjugates and complexes; Southern blots and other methodologies related to DNA and RNA analysis; Western blots; and purification of proteins or other antigens with biotinylated antibodies or lectins by use of immobilized avidin.

Assay Dilutions:	All assays should be optimized by the user. Recommended dilutions (if any) may be listed below.
ChIP:	User Optimized
ELISA:	User Optimized
EMSA:	User Optimized
FC:	User Optimized
Neutralization:	User Optimized
WB:	User Optimized

Formulation

Physical State:	Lyophilized
Concentration:	10 mg/mL by dry weight
Buffer:	None
Preservative:	None
Stabilizer:	None
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 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

SDS-PAGE

SDS-Page of Avidin.

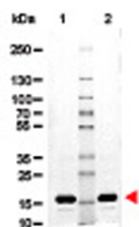
Lane 1: Avidin - reduced.

Lane 2: Avidin - non-reduced.

Load: 1.0 μ g per lane.

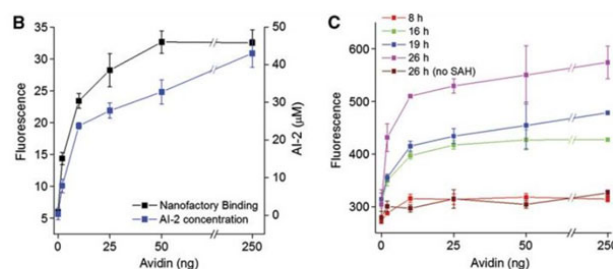
Predicted/Observed size: 16 kDa for Avidin.

Other Band(s): None.



Bottle

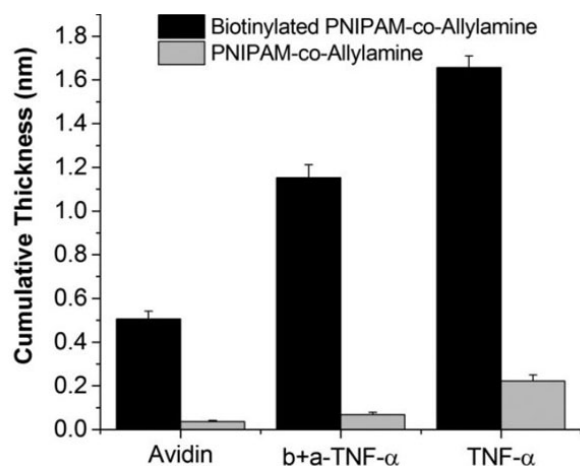
Avidin



ELISA

In situ generation of AI-2 through surface assembled NF and QS-activated gene expression from 'docked' bacterial cells.

(B) NF targeting and subsequent in vitro AI-2 synthesis on avidin plate wells. NF loading was determined by FITC fluorescence and AI-2 concentrations were measured by Ellman's assay. (C) *E. coli* W3110 (Δ IsrFG Δ luxS) response to in vitro AI-2 synthesized by NF assembled onto avidin plate wells. Bacterial suspensions were added directly to wells and DsRed intensities were measured via fluorescence plate reader. The negative control is without SAH addition. Figure 2. PMID: 23340842.



ELISA

Average spot thickness as measured with AIR on immobilized PNIPAM-co-AA (gray bar) and PNIPAM-co-AA-biotin (black bar) after consecutive staged incubation with avidin, followed by 10 nM biotinylated anti-human TNF- α (b +TNF- α), and ending with 10 nM TNF- α target detection (TNF- α). Error bars are reported as standard deviations from averaged measurements (n>3). Figure 6. PMID: 26140413.

References

- Zhang H et al. Label-Free, Multiplex Glycan Microarray Biosensor for Influenza Virus Detection. *Bioconjug. Chem.* (2021)
- Niu, J et al. Cinobufagin-induced DNA damage response activates G2/M checkpoint and apoptosis to cause selective cytotoxicity in cancer cells. *Cancer Cell International* (2021)
- Lifson, MA et al. Functionalized Polymer Microgel Particles Enable Customizable Production of Label-Free Sensor Arrays. *Analytical Chemistry* (2015)
- Wu, HC et al. Autonomous bacterial localization and gene expression based on nearby cell receptor density. *Molecular Systems Biology* (2013)
- Barth, BM. et al. Bioconjugation of calcium phosphosilicate composite nanoparticles for selective targeting of human breast and pancreatic cancers in vivo. *Acs Nano* (2010)
- Ishov, A M. et al. Human cytomegalovirus immediate early interaction with host nuclear structures: definition of an immediate transcript environment. *The Journal of Cell Biology* (1997)

Disclaimer

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