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## **Data Sheet**

### **BirA-transformed Competent *E. coli* cells**

#### **Catalog #27462**

**BACKGROUND:** Biotin-labeling is commonly used for non-radioactive labeling and purification of proteins and other target molecules. Biotin labeling takes advantage of the exceptionally strong interaction between biotin (vitamin H) and either avidin or streptavidin. The affinity of biotin to avidin or streptavidin is one of the strongest known non-covalent interactions of a protein and ligand, exhibiting a dissociation constant ( $K_d$ ) around  $10^{-15}$ . BirA protein ligase covalently adds biotin to biotin-acceptor peptides containing an AviTag™ sequence in a highly efficient and specific ATP-dependent reaction.

**DESCRIPTION:** *BirA-transformed Competent E. coli cells* are supplied as 10 x 50 µl vials. Strain BL21, a chemically competent *E. coli* B strain, contains an IPTG-inducible BirA expression plasmid and constitutively-expressed streptomycin/spectinomycin resistance gene. These cells are compatible with most cloning vectors and are suitable for expression and biotinylation of recombinant proteins using AviTag™ technology.

**APPLICATIONS:** Useful for specific labeling of proteins/peptides with biotin for downstream applications.

**STABILITY:** One year from date of receipt when stored at -80°C.

**ASSAY PROTOCOL:** For a detailed protocol, please see BPS Bioscience's *E. coli in vivo* Biotinylation Kit, Cat. #27461.

OUR PRODUCTS ARE FOR RESEARCH USE ONLY. NOT FOR DIAGNOSTIC OR THERAPEUTIC USE.

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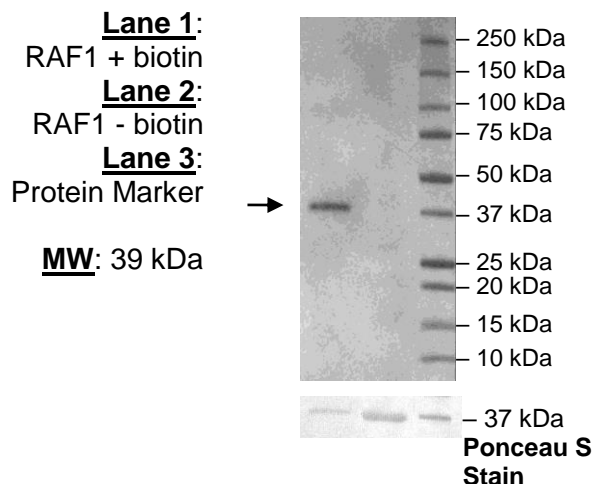
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#### QUALITY CONTROL:

##### 4-20% SDS-PAGE



Biotinylation was confirmed using the *E. coli in vivo* Biotinylation Kit, Cat. #27461 and a RAF1-GST-AviTag™ expression construct following the recommended protocol. RAF1 expressing lysates were incubated with (Lane 1) or without (Lane 2) biotin and RAF1 was purified using sequential GST- and avidin-affinity chromatography. Purified RAF1 was tested for biotinylation by SDS-PAGE and Streptavidin-HRP detection.

#### RELATED PRODUCTS

*E. coli in vivo* Biotinylation Kit

BirA, GST-tag

BirA, His-FLAG-tags (*E. coli*-derived)

BirA, His-FLAG-tags (Sf9-derived)

#### CATALOG #

27461

70031

70030

70032

#### SIZE

10 rxns.

100 µg

100 µg

50 µg

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