

## Data Sheet

### BirA

Recombinant, N-terminal His-FLAG tag

**Catalog #:** w80041

Lot#: 120301      Conc.: 0.39 mg/ml

**Formulated in:** 50 mM Tris-HCl, pH 8.0, 50 mM NaCl, 150 mM imidazole, 3 mM DTT, and 5% Glycerol.

**Stability:** >6 months at -80°C

#### References:

1. Li, Y., *et al.*, *Protein Expr Purif.* 2012 Mar; **82(1)**: 162-7.
2. Chakravarty, V., *et al.*, *J Bacteriol.* 2012 Mar; **194(5)**: 1113-26.

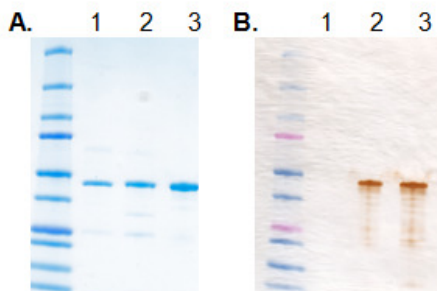
**Description:** Biotin ligase BirA, GenBank Accession No. NP\_418404, a.a. 2 – 321 with N-terminal His-FLAG tag, MW = 37.1 kDa, expressed in an *E. coli* cell expression system.

**Enzyme Activity:** BirA (10 µg/ml) completely biotinylated 10 µM of substrate MBP-Avi at 30°C for 30 minutes in the standard reaction buffer containing 50 mM Bicine pH 8.3, 10 mM ATP, 10 mM MgOAc, and 50 µM d-Biotin.

**Application:** Useful for the study of enzyme kinetics, screening inhibitors, and selectivity profiling.

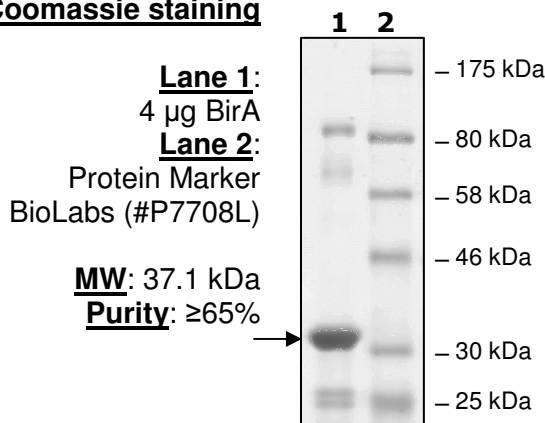
## Quality Assurance

### BirA Biotinylation Assay



MBP-Avi biotinylation with His-FLAG-BirA using the standard reaction conditions as outlined in Enzyme Activity. **A.** Coomassie blue stained gel showing protein markers (Biorad, #161-0374), (1) unbiotinylated MBP-Avi, (2) His-FLAG-BirA / MBP-Avi, and (3) MBP-Avi-biotin control. **B.** The corresponding Western blot probed with Streptavidin-HRP and developed with DAB (3,3'-Diaminobenzidine) substrate.

### 10% SDS-PAGE Coomassie staining



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