

Catalog No.: RPT0040LQ **Recombinant**

Species	Gene ID	Swiss Prot
E.coli K12	P06709	948469

NO tag

birA; bioR; dhbB; b3973;
JW3941 □ Bifunctional ligase/repressor
BirA

Source	Purification
<i>E. coli</i>	≥ 95 % as determined by SDS-PAGE.

Calculated MW	Observed MW
35.18 kDa	35-45 kDa

< 0.01 EU per µg of the protein as determined by the LAL method.

Lyophilized from 0.22μm filtered solution
in 20mM Tris 100mM NaCl pH7.5 □10%
Glycerol.

Reconstitution

BirA is a key reagent because of its ability to biotinylate proteins at a specific residue in a recognition sequence. This enzyme is used to biotinylate the C termini of membrane proteins, allowing these proteins to be tetramerized by binding to streptavidin. Because of the specificity of the biotinylation at the C terminus, the orientation of the membrane proteins on the streptavidin is equivalent to that of the native protein on the cell surface. These tetrameric proteins can be used to study protein receptor-ligand interactions at the cell surface, and site-specific biotinylation can be used to study proteins *in vitro* using a defined orientation. The biotinylation of histones by BirA ligase is consistent with the proposed role of human HCS in chromatin. The N-terminal BirA domain is required for both transcriptional regulation of biotin synthesis and biotin protein ligase activity.

Recombinant E.coli K12 BirA Protein is produced by HEK293 cells expression system. The target protein is expressed with sequence (Lys2-Lys321) of E.coli K12 BirA(Accession #NP_418404.1) fused with No Tag.

Lyophilized proteins are shipped at ambient temperature.
Liquid proteins are shipped at frozen temperature with dry ice.
Upon receipt, store it immediately at the temperature recommended below.

Store at -70°C. This product is stable at $\leq -70^{\circ}\text{C}$ for up to 1 year from the date of receipt. For optimal storage, aliquot into smaller quantities after centrifugation and store at recommended temperature. Avoid repeated freeze-thaw cycles.

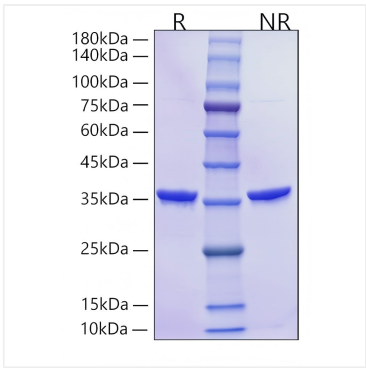
For your safety and health, please wear a lab coat and disposable gloves for handling.

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Validation Data



Recombinant E.coli K12 BirA Protein was determined by SDS-PAGE under reducing (R) and non-reducing (NR) conditions.