



Figure S4. Confirmation of the mutant *B. licheniformis* WX-02 Δ *gdh*/pHY-*gdh* strain by PCR amplification.

Lane M: DL5000 marker; *Lane 1:* negative control (PCR products amplified from the wild strain WX-02); *Lane 2:* PCR products of fusion fragment of P43-*gdh*-TamyL from WX-02 Δ *gdh*/pHY-*gdh* with the primers P43-*gdh*-TamyL-1 and 6.