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Identification of *Litopenaeus vannamei* BiP as a novel cellular attachment protein for white spot syndrome virus by using a biotinylation based affinity chromatography method

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1 Identification of *Litopenaeus vannamei* BiP as a Novel 2 Cellular Attachment Protein for White Spot Syndrome Virus 3 by Using a Biotinylation Based Affinity Chromatography 4 Method

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13 Abstract:

14 White spot syndrome virus (WSSV) is a dangerous threat to shrimp farming that
15 also attacks a wide range of crustaceans. Knowledge of the surface protein-protein
16 interactions between the pathogen and host is very crucial to unraveling the molecular
17 pathogenesis mechanisms of WSSV. In this study, LvBiP (*Litopenaeus vannamei*
18 immunoglobulin heavy-chain-binding protein) was identified as a novel WSSV
19 binding protein of *L. vannamei* by a biotinylation based affinity chromatography
20 method. By using pull-down and ELISA assays, the binding of recombinant LvBiP to
21 WSSV was proved to be specific and ATP- dependent. The interaction was also

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