**Table S5. *S. coelicolor* interaction partners of the eSTPK PkaI**

|  |  |  |  |
| --- | --- | --- | --- |
| **Category** | **Protein** | **Times found/ library§** | **Putative function/ characteristics** |
| **Differentiation** | SCO1403\* | 5 E | putative membrane protein, interacts with MreC and RodZ |
| SCO2097\* | 35 E | Actinomycetes signature protein, part of *dcw* cluster, role in sporulation, interacts with MreC, MreD, PBP2, Sfr, FtsI, RodZ  |
| SCO2897 | 1 N | probable secreted penicillin-binding protein |
| SCO3110\* | 1 N | FtsX-like ABC transporter int. membrane subunit, interacts with MreC |
| SCO3754\* | 1 N | FtsX-like ABC transporter int. membrane subunit interacts with MreC, MreD |
| SCO3854 (CrgA) | 1 N | Septation inhibitor protein, coordinates growth and cell division in aerial hyphae |
| SCO4907(AfsQ1) | 1 N | pleiotropic transcriptional regulator |
| SCO5587 (FtsH) | 1 N | cell division protein, zinc metalloprotease |
| SCO5723 (BldB) | 1 N | transcriptional regulator, differentiation |
| SCO6494\* | 2 E | put. membrane protein, interacts with MreD |
| **eSTPK** | SCO2974 (PkaA) | 2 N | serine/threonine protein kinase  |
| SCO4777 (PkaD) | 2 N | serine/threonine protein kinase |
| SCO4778\* (PkaI)  | 1 E | serine/threonine protein kinase, interacts with MreC, MreD, PBP2, Sfr, FtsI, RodZ |
| SCO7326 | 1 E | serine/threonine phosphatase |
| **Other** | SCO1058 (UgpE) | 1 N | ABC transporter, transmembrane subunit |
|  | SCO4140 (PstA) | 1 N | phosphate ABC transport system permease |
| SCO6374 | 1 N | putative sugar transferase |
| **Hypothetical****proteins** | SCO1465 | 1 E | putative secreted protein |
| SCO1829 | 2 N | putative membrane protein |
| SCO2169 | 2 N | putative integral membrane protein |
| SCO2255 | 1 N | putative membrane protein |
| SCO3146  | 1 N | putative secreted protein |
| SCO3218 | 1 N | conserved hypothetical protein |
| SCO3855 | 1 E | putative membrane protein |
| SCO3940 | 1 N | putative transmembrane protein |
| SCO4431 | 3 N | putative integral membrane protein |
| SCO4641 | 1 N | putative transmembrane efflux protein |
| SCO4846 | 1 E | putative integral membrane protein |
| SCO5013 | 3 N | putative secreted protein |
| SCO5148 | 1 N | putative membrane protein |
| SCO5485 | 1 N | small hydrophobic membrane protein |
| SCO5587  | 1 N | large hypothetical protein |
| SCO5935 | 1 N | putative membrane protein |
| SCO5993 | 1 N | putative membrane protein |
| SCO6074 | 1 E | putative integral membrane protein |
| SCO6614 | 1 N | putative membrane protein |
| SCO6899 | 1 E | putative membrane protein |
| SCO7482 | 1 E | putative integral membrane protein |

§ E: enzymatically generated library; N: nebulized library

\* Previously identified as components of the SSSC (Kleinschnitz et al., 2011)