

Table S8: Performance of hybrid model (BLAST+ML) on the validation set of gram-positive ABPs independent at different e-value

| E-value | Correct hits (BLAST+ML) | Sn | Sp | Acc | AUC | AUPRC | MCC |
|-----------------|--------------------------------|-------------|-------------|-------------|-------------|--------------|-------------|
| 1.00E-20 | 86.02% | 81.7 | 90.3 | 86.0 | 0.94 | 0.93 | 0.72 |
| 1.00E-10 | 85.75% | 81.2 | 90.3 | 85.8 | 0.93 | 0.92 | 0.72 |
| 1.00E-06 | 86.29% | 82.3 | 90.3 | 86.3 | 0.93 | 0.91 | 0.73 |
| 0.0001 | 86.83% | 83.3 | 90.3 | 86.8 | 0.93 | 0.91 | 0.74 |
| 0.001 | 87.90% | 85.5 | 90.3 | 87.9 | 0.93 | 0.91 | 0.76 |
| 0.01 | 88.44% | 86.0 | 90.9 | 88.4 | 0.93 | 0.92 | 0.77 |
| 0.1 | 87.90% | 86.6 | 89.3 | 87.9 | 0.93 | 0.92 | 0.76 |
| 1 | 86.56% | 87.1 | 86.0 | 86.6 | 0.93 | 0.92 | 0.73 |
| 10 | 81.18% | 83.9 | 78.5 | 81.2 | 0.90 | 0.89 | 0.62 |
| 50 | 80.11% | 83.3 | 76.9 | 80.1 | 0.90 | 0.89 | 0.60 |
| 100 | 80.38% | 83.3 | 77.4 | 80.4 | 0.90 | 0.89 | 0.61 |
| 200 | 80.11% | 83.3 | 76.9 | 80.1 | 0.90 | 0.89 | 0.60 |
| 1000 | 80.38% | 83.9 | 76.9 | 80.4 | 0.91 | 0.89 | 0.61 |
| Only ML | 85.48% | 80.7 | 90.3 | 85.5 | 0.93 | 0.92 | 0.71 |

Sn: Sensitivity, **Sp**: Specificity, **Acc**: Accuracy, **MCC**: Matthews Correlation Coefficient, **AUC**: Area Under the Receiver Operating Characteristic curve, **AUPRC**: Area Under the Precision-Recall Curve