

|                                               |              | Callus on EXP medium |           |           |           |           |           |
|-----------------------------------------------|--------------|----------------------|-----------|-----------|-----------|-----------|-----------|
| Gene                                          |              | A                    |           |           | B         |           |           |
|                                               |              | NE                   | E         | R         | NE        | E         | R         |
| Ethylene biosynthetic & transduction pathways | HbSAMS       | 6.26E-03*            | 2.21E-02* | 1.14E-01* | 6.26E-03* | 2.21E-02* | 1.14E-01* |
|                                               | HbACS1       | 6.23E-04*            | 1.86E-03* | 3.63E-02* | 6.23E-04* | 1.86E-03* | 3.63E-02* |
|                                               | HbACS2       | 2.97E-03*            | 3.11E-03* | 1.33E-02* | 2.97E-03* | 3.11E-03* | 1.33E-02* |
|                                               | HbACS3       | 9.01E-02*            | 2.37E-01* | 2.93E+00* | 9.01E-02* | 2.37E-01* | 2.93E+00* |
|                                               | HbACO1       | 4.04E-03*            | 5.23E-02* | 6.13E-02* | 4.04E-03* | 5.23E-02* | 6.13E-02* |
|                                               | HbACO2       | 1.93E-02*            | 3.74E-02* | 2.00E-01* | 1.93E-02* | 3.74E-02* | 2.00E-01* |
|                                               | HbACO3       | 1.88E-03*            | 1.04E-03* | 9.45E-03* | 1.88E-03* | 1.04E-03* | 9.45E-03* |
|                                               | HbETR1       | 1.11E-01*            | 2.58E-01* | 7.88E-01* | 1.11E-01* | 2.58E-01* | 7.88E-01* |
|                                               | HbETR2       | 1.03E+00*            | 1.63E+00* | 2.13E+00* | 1.03E+00* | 1.63E+00* | 2.13E+00* |
|                                               | HbEIN3       | 1.14E+00*            | 1.39E+00* | 1.14E+00* | 1.14E+00* | 1.39E+00* | 1.14E+00* |
| HbERF-I                                       | HbERF-Ia1    | 7.74E03*             | 9.04E03*  | 9.98E03*  | 7.74E03*  | 9.04E03*  | 9.98E03*  |
|                                               | HbERF-Ib1    | 1.22E+01             | 1.11E+01  | 5.22E+00  | 1.22E+01  | 1.11E+01  | 5.22E+00  |
|                                               | HbERF-Ib2    | 5.42E+00             | 4.61E+00  | 3.13E+00  | 5.42E+00  | 4.61E+00  | 3.13E+00  |
|                                               | HbERF-Ib3    | 1.36E+01             | 1.97E+01  | 1.91E+01  | 1.36E+01  | 1.97E+01  | 1.91E+01  |
|                                               | HbERF-Ib4    | 1.07E+00             | 8.31E01   | 2.73E+00  | 1.07E+00  | 8.31E01   | 2.73E+00  |
|                                               | HbERF-Ib5    | 2.89E+00             | 2.98E+00  | 3.68E+00  | 2.89E+00  | 2.98E+00  | 3.68E+00  |
|                                               | HbERF-Ib6    | 5.74E+00             | 1.64E+00  | 3.41E+00  | 5.74E+00  | 1.64E+00  | 3.41E+00  |
|                                               | HbERF-Ib7    | 1.90E+00             | 1.61E+00  | 4.21E+00  | 1.90E+00  | 1.61E+00  | 4.21E+00  |
|                                               | HbERF-Ib8    | 5.17E+00             | 9.89E+00  | 1.03E+01  | 5.17E+00  | 9.89E+00  | 1.03E+01  |
|                                               | HbERF-Ib9    | 8.75E01*             | 8.89E01*  | 5.88E+00  | 8.75E01*  | 8.89E01*  | 5.88E+00  |
| HbERF-II                                      | HbERF-Ib10   | 1.66E02*             | 2.17E02*  | 7.44E02*  | 1.66E02*  | 2.17E02*  | 7.44E02*  |
|                                               | HbERF-Ib11   | 3.60E03*             | 1.18E02*  | 8.19E03*  | 3.60E03*  | 1.18E02*  | 8.19E03*  |
|                                               | HbERF-IIa1   | 6.94E02*             | 3.79E02*  | 6.08E02*  | 6.94E02*  | 3.79E02*  | 6.08E02*  |
|                                               | HbERF-IIa3   | 1.52E+00             | 2.31E+00  | 9.35E+00  | 1.52E+00  | 2.31E+00  | 9.35E+00  |
|                                               | HbERF-IIb1   | 7.84E02*             | 1.18E01   | 4.03E01   | 7.84E02*  | 1.18E01   | 4.03E01   |
|                                               | HbERF-IIb2   | 3.89E02*             | 2.43E02*  | 5.36E01   | 3.89E02*  | 2.43E02*  | 5.36E01   |
|                                               | HbERF-IIb4   | 1.42E03*             | 2.66E03*  | 5.33E03*  | 1.42E03*  | 2.66E03*  | 5.33E03*  |
|                                               | HbERF-IIb5   | 1.85E01*             | 1.03E01*  | 1.55E+00  | 1.85E01*  | 1.03E01*  | 1.55E+00  |
|                                               | HbERF-IIa1a  | 6.90E02*             | 3.82E01*  | 1.30E+00  | 6.90E02*  | 3.82E01*  | 1.30E+00  |
|                                               | HbERF-IIb1b1 | 5.75E03*             | 3.25E03*  | 1.63E02*  | 5.75E03*  | 3.25E03*  | 1.63E02*  |
| HbERF-III                                     | HbERF-IIb2b2 | 6.37E03*             | 1.06E02*  | 6.83E02*  | 6.37E03*  | 1.06E02*  | 6.83E02*  |
|                                               | HbERF-IIIc1  | 1.48E01*             | 2.91E01*  | 1.16E+00  | 1.48E01*  | 2.91E01*  | 1.16E+00  |
|                                               | HbERF-IIIa2  | 3.57E01*             | 6.05E01*  | 5.03E01   | 3.57E01*  | 6.05E01*  | 5.03E01   |
|                                               | HbERF-IIIa3  | 2.12E03*             | 1.49E03*  | 5.74E03*  | 2.12E03*  | 1.49E03*  | 5.74E03*  |
|                                               | HbERF-IIIe1  | 5.11E03*             | 6.74E03*  | 1.72E02*  | 5.11E03*  | 6.74E03*  | 1.72E02*  |
|                                               | HbERF-IIIe2  | 1.18E01*             | 2.34E01*  | 3.01E01   | 1.18E01*  | 2.34E01*  | 3.01E01   |
|                                               | HbERF-IIIc3  | 6.54E03*             | 1.23E02*  | 1.06E01   | 6.54E03*  | 1.23E02*  | 1.06E01   |
|                                               | HbERF-IIIe4  | 1.11E01*             | 6.24E02*  | 1.03E01   | 1.11E01*  | 6.24E02*  | 1.03E01   |
|                                               | HbERF-IVa1   | 2.41E01*             | 1.54E01*  | 1.52E+00  | 2.41E01*  | 1.54E01*  | 1.52E+00  |
|                                               | HbERF-IVa2   | 1.69E01*             | 2.07E01*  | 1.00E+00  | 1.69E01*  | 2.07E01*  | 1.00E+00  |
| HbERF-V                                       | HbERF-IVa3   | 5.93E02*             | 6.70E02*  | 1.69E01*  | 5.93E02*  | 6.70E02*  | 1.69E01*  |
|                                               | HbERF-Va1    | 6.77E02*             | 9.64E02*  | 3.44E01*  | 6.77E02*  | 9.64E02*  | 3.44E01*  |
|                                               | HbERF-Va2    | 9.02E02*             | 8.84E02*  | 3.78E01*  | 9.02E02*  | 8.84E02*  | 3.78E01*  |
|                                               | HbERF-Vb1    | 5.57E02*             | 5.03E02*  | 3.19E02*  | 5.57E02*  | 5.03E02*  | 3.19E02*  |
|                                               | HbERF-Vb2    | 1.34E01*             | 5.87E02*  | 4.34E01*  | 1.34E01*  | 5.87E02*  | 4.34E01*  |
|                                               | HbERF-Vb3    | 4.85E02*             | 6.69E01*  | 3.47E01*  | 4.85E02*  | 6.69E01*  | 3.47E01*  |
|                                               | HbERF-VII1   | 1.31E02*             | 1.62E02*  | 6.09E02*  | 1.31E02*  | 1.62E02*  | 6.09E02*  |
|                                               | HbERF-VI2    | 4.01E02*             | 3.37E02*  | 1.30E01*  | 4.01E02*  | 3.37E02*  | 1.30E01*  |
|                                               | HbERF-VI3    | 1.05E02*             | 9.25E02*  | 1.88E01*  | 1.05E02*  | 9.25E02*  | 1.88E01*  |
|                                               | HbERF-VI4    | 1.45E03*             | 1.19E02*  | 3.60E02*  | 1.45E03*  | 1.19E02*  | 3.60E02*  |
| HbERF-VI                                      | HbERF-VI5    | 7.61E01*             | 8.40E01*  | 7.88E01*  | 7.61E01*  | 8.40E01*  | 7.88E01*  |
|                                               | HbERF-VI-L1  | 3.91E01*             | 4.57E01*  | 2.27E+00  | 3.91E01*  | 4.57E01*  | 2.27E+00  |
|                                               | HbERF-VI-L2  | 3.23E01*             | 4.65E01*  | 1.36E+00  | 3.23E01*  | 4.65E01*  | 1.36E+00  |
|                                               | HbERF-VI-L3  | 5.68E01*             | 9.90E01*  | 1.75E+00  | 5.68E01*  | 9.90E01*  | 1.75E+00  |
|                                               | HbERF-VI-L4  | 6.88E02*             | 1.37E01*  | 4.51E01*  | 6.88E02*  | 1.37E01*  | 4.51E01*  |
|                                               | HbERF-VI-L5  | 3.93E01*             | 5.79E01*  | 3.01E+00  | 3.93E01*  | 5.79E01*  | 3.01E+00  |
|                                               | HbERF-VI-L6  | 3.59E02*             | 3.80E01*  | 1.37E+00  | 3.59E02*  | 3.80E01*  | 1.37E+00  |
|                                               | HbERF-VIIa1  | 3.91E01*             | 3.84E01*  | 3.23E01*  | 3.91E01*  | 3.84E01*  | 3.23E01*  |
|                                               | HbERF-VIIa2  | 3.51E01*             | 6.44E01*  | 5.60E01*  | 3.51E01*  | 6.44E01*  | 5.60E01*  |
|                                               | HbERF-VIIa3  | 1.62E01*             | 5.46E01*  | 6.86E01*  | 1.62E01*  | 5.46E01*  | 6.86E01*  |
| HbERF-VII                                     | HbERF-VIIa4  | 2.00E01*             | 5.37E01*  | 9.23E01*  | 2.00E01*  | 5.37E01*  | 9.23E01*  |
|                                               | HbERF-VIIa5* | 6.15E02*             | 4.61E02*  | 6.53E02*  | 6.15E02*  | 4.61E02*  | 6.53E02*  |
|                                               | HbERF-VIIa6  | 1.52E+01             | 5.23E+01  | 4.58E+01  | 1.52E+01  | 5.23E+01  | 4.58E+01  |
|                                               | HbERF-VIIa7  | 1.82E+01             | 6.53E+01  | 6.49E+01  | 1.82E+01  | 6.53E+01  | 6.49E+01  |
|                                               | HbERF-VIIa9  | 7.26E+00             | 5.75E+00  | 9.79E+00  | 7.26E+00  | 5.75E+00  | 9.79E+00  |
|                                               | HbERF-VIIa10 | 2.77E+01             | 8.36E+01  | 9.83E+01  | 2.77E+01  | 8.36E+01  | 9.83E+01  |
|                                               | HbERF-VIIa11 | 1.40E+00             | 1.51E+00  | 2.34E+00  | 1.40E+00  | 1.51E+00  | 2.34E+00  |
|                                               | HbERF-VIIa12 | 4.52E+01             | 1.18E+02  | 1.14E+02  | 4.52E+01  | 1.18E+02  | 1.14E+02  |
|                                               | HbERF-VIIa13 | 3.24E+00             | 1.44E+01  | 9.83E+00  | 3.24E+00  | 1.44E+01  | 9.83E+00  |
|                                               | HbERF-VIIa15 | 1.85E+01             | 1.07E+01  | 3.53E+01  | 1.85E+01  | 1.07E+01  | 3.53E+01  |
| HbERF-VIII                                    | HbERF-VIIa17 | 5.38E02*             | 2.69E01*  | 2.84E+00  | 5.38E02*  | 2.69E01*  | 2.84E+00  |
|                                               | HbERF-VIIa18 | 3.70E03*             | 6.24E03*  | 4.05E02*  | 3.70E03*  | 6.24E03*  | 4.05E02*  |
|                                               | HbERF-VIIa19 | 5.14E+01             | 6.94E+01  | 1.69E+02  | 5.14E+01  | 6.94E+01  | 1.69E+02  |
|                                               | HbERF-VIIa20 | 6.18E03*             | 7.56E03*  | 5.46E02*  | 6.18E03*  | 7.56E03*  | 5.46E02*  |
|                                               | HbERF-VIIa21 | 1.59E+00             | 1.12E+00  | 9.43E+00  | 1.59E+00  | 1.12E+00  | 9.43E+00  |
|                                               | HbERF-VIIa22 | 3.00E03*             | 5.15E02*  | 4.17E01*  | 3.00E03*  | 5.15E02*  | 4.17E01*  |
|                                               | HbERF-VIIa23 | 1.33E+00             | 5.63E01*  | 5.77E+00  | 1.33E+00  | 5.63E01*  | 5.77E+00  |
|                                               | HbERF-VIIa1  | 2.30E+00             | 2.19E+00  | 2.69E+00  | 2.30E+00  | 2.19E+00  | 2.69E+00  |
|                                               | HbERF-VIIa2  | 5.30E01*             | 4.58E01*  | 4.58E01*  | 5.30E01*  | 4.58E01*  | 4.58E01*  |
|                                               | HbERF-VIIa3  | 9.92E01*             | 9.92E+00  | 6.81E01*  | 9.92E01*  | 9.92E+00  | 6.81E01*  |
| HbERF-VIII                                    | HbERF-VIIa4  | 1.00E+00             | 3.08E+00  | 2.67E+00  | 1.00E+00  | 3.08E+00  | 2.67E+00  |
|                                               | HbERF-VIIa5  | 4.25E01*             | 5.39E01*  | 8.52E01*  | 4.25E01*  | 5.39E01*  | 8.52E01*  |
|                                               | HbERF-VIIa7  | 1.63E+00             | 1.81E+00  | 2.67E+00  | 1.63E+00  | 1.81E+00  | 2.67E+00  |
|                                               | HbERF-VIIa8  | 5.11E01*             | 5.72E01*  | 2.47E+00  | 5.11E01*  | 5.72E01*  | 2.47E+00  |
|                                               | HbERF-VIIa9  | 1.77E+00             | 2.89E+00  | 4.74E+00  | 1.77E+00  | 2.89E+00  | 4.74E+00  |
|                                               | HbERF-VIIa10 | 1.18E+00             | 1.57E+00  | 6.19E+00  | 1.18E+00  | 1.57E+00  | 6.19E+00  |
|                                               | HbERF-VIIa11 | 1.21E+00             | 1.70E+00  | 3.60E+00  | 1.21E+00  | 1.70E+00  | 3.60E+00  |
|                                               | HbERF-VIIa12 | 8.97E01*             | 1.15E+00  | 2.84E+00  | 8.97E01*  | 1.15E+00  | 2.84E+00  |
|                                               | HbERF-VIIa13 | 8.37E02*             | 1.16E01*  | 6.05E01*  | 8.37E02*  | 1.16E01*  | 6.05E01*  |
|                                               | HbERF-VIIa14 | 4.27E01*             | 3.47E+00  | 3.40E+00  | 4.27E01*  | 3.47E+00  | 3.40E+00  |
| HbERF-IX                                      | HbERF-VIIb1  | 7.80E01*             | 7.83E01*  | 7.80E01*  | 7.80E01*  | 7.83E01*  | 7.80E01*  |
|                                               | HbERF-VIIb1  | 3.15E01*             | 2.15E01*  | 7.67E01*  | 3.15E01*  | 2.15E01*  | 7.67E01*  |
|                                               | HbERF-Da1    | 2.25E01*             | 3.17E01*  | 2.83E01*  | 2.25E01*  | 3.17E01*  | 2.83E01*  |
|                                               | HbERF-Da2    | 1.43E01*             | 1.11E+00  | 2.05E+00  | 1.43E01*  | 1.11E+00  | 2.05E+00  |
|                                               | HbERF-Da3    | 1.07E01*             | 1.12E+00  | 9.03E01*  | 1.07E01*  | 1.12E+00  | 9.03E01*  |
|                                               | HbERF-Da4    | 3.08E02*             | 1.65E01*  | 1.45E01*  | 3.08E02*  | 1.65E01*  | 1.45E01*  |
|                                               | HbERF-Db1    | 3.75E01*             | 2.72E01*  | 1.93E01*  | 3.75E01*  | 2.72E01*  | 1.93E01*  |
|                                               | HbERF-Db2    | 5.58E03*             | 2.92E03*  | 1.48E02*  | 5.58E03*  | 2.92E03*  | 1.48E02*  |
|                                               | HbERF-Db3    | 1.98E01*             | 2.34E01*  | 1.32E01*  | 1.98E01*  | 2.34E01*  | 1.32E01*  |
|                                               | HbERF-Db4    | 3.76E01*             | 1.03E+00  | 1.58E+00  | 3.76E01*  | 1.03E+00  | 1.58E+00  |
| HbERF-IX                                      | HbERF-Db5    | 5.15E01*             | 8.01E01*  | 4.58E01*  | 5.15E01*  | 8.01E01*  | 4.58E01*  |
|                                               | HbERF-Db6    | 1.02E+00             | 1.59E+00  | 1.68E+00  | 1.02E+00  | 1.59E+00  | 1.68E+00  |
|                                               | HbERF-Db7    | 4.68E02*             | 5.11E02*  | 6.04E02*  | 4.68E02*  | 5.11E02*  | 6.04E02*  |
|                                               | HbERF-Db8    | 8.04E02*             | 1.79E01*  | 1.24E01*  | 8.04E02*  | 1.79E01*  | 1.24E01*  |
|                                               | HbERF-Dc1    | 2.11E02*             | 4.05E02*  | 1.28E01*  | 2.11E02*  | 4.05E02*  | 1.28E01*  |
|                                               | HbERF-Dc3    | 6.31E03*             | 8.04E03*  | 1.72E02*  | 6.31E03*  | 8.04E03*  | 1.72E02*  |
|                                               | HbERF-Dc4    | 1.05E02*             | 5.72E02*  | 6.00E01*  | 1.05E02*  | 5.72E02*  | 6.00E01*  |
|                                               | HbERF-Dc5    | 1.18E02*             | 1.79E02*  | 5.81E02*  | 1.18E02*  | 1.79E02*  | 5.81E02*  |
|                                               | HbERF-Dc6    | 2.24E03*             | 3.69E02*  | 9.01E03*  | 2.24E03*  | 3.69E02*  | 9.01E03*  |
|                                               | HbERF-Dc7    | 1.48E02*             | 4.14E02*  | 9.10E02*  | 1.48E02*  | 4.14E02*  | 9.10E02*  |
| HbERF-X                                       | HbERF-Xa1    | 2.15E+00             | 2.54E+00  | 1.78E+00  | 2.15E+00  | 2.54E+00  | 1.78E+00  |
|                                               | HbERF-Xa2    | 4.79E02*             | 1.20E01*  | 8.44E02*  | 4.79E02*  | 1.20E01*  | 8.44E02*  |
|                                               | HbERF-Xa3    | 3.55E+00             | 4.17E+00  | 3.14E+00  | 3.55E+00  | 4.17E+00  | 3.14E+00  |
|                                               | HbERF-Xa4    | 3.68E02*             | 3.19E02*  | 1.38E01*  | 3.68E02*  | 3.19E02*  | 1.38E01*  |
|                                               | HbERF-Xa5    | 1.04E02*             | 2.14E02*  | 7.42E02*  | 1.04E02*  | 2.14E02*  | 7.42E02*  |
|                                               | HbERF-Xa6    | 2.18E02*             | 4.47E02*  | 1.05E01*  | 2.18E02*  | 4.47E02*  | 1.05E01*  |
|                                               | HbERF-Xa8    | 1.75E02*             | 1.56E02*  | 8.51E02*  | 1.75E02*  | 1.56E02*  | 8.51E02*  |
|                                               | HbERF-Xb1    | 2.00E03*             | 1.52E02*  | 9.51E03*  | 2.00E03*  | 1.52E02*  | 9.51E03*  |
|                                               | HbAP2-1      | 3.84E01*</           |           |           |           |           |           |