**Table S4 Detailed information of genes encoding CAZymes in** **the genome of *P. paneum* OM1**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Family** | **SeqID** | **Domain** | **Class** | **Class information** | **Domain description** |
| AAs-Total 68 | gene\_01941.t1 | AA1.hmm | AAs | Auxiliary Activities | http://www.cazy.org/AA1.html |
| gene\_02010.t1 | AA1.hmm | AAs | Auxiliary Activities | http://www.cazy.org/AA1.html |
| gene\_05304.t1 | AA1.hmm | AAs | Auxiliary Activities | http://www.cazy.org/AA1.html |
| gene\_08542.t1 | AA1.hmm | AAs | Auxiliary Activities | http://www.cazy.org/AA1.html |
| gene\_09648.t1 | AA1.hmm | AAs | Auxiliary Activities | http://www.cazy.org/AA1.html |
| gene\_05744.t1 | AA1\_2.hmm | AAs | Auxiliary Activities | http://www.cazy.org/AA1\_2.html |
| gene\_07939.t1 | AA1\_2.hmm | AAs | Auxiliary Activities | http://www.cazy.org/AA1\_2.html |
| gene\_04617.t1 | AA1\_3.hmm | AAs | Auxiliary Activities | http://www.cazy.org/AA1\_3.html |
| gene\_06695.t1 | AA1\_3.hmm | AAs | Auxiliary Activities | http://www.cazy.org/AA1\_3.html |
| gene\_08542.t1 | AA1\_3.hmm | AAs | Auxiliary Activities | http://www.cazy.org/AA1\_3.html |
| gene\_09876.t1 | AA1\_3.hmm | AAs | Auxiliary Activities | http://www.cazy.org/AA1\_3.html |
| gene\_04836.t1 | AA11.hmm | AAs | Auxiliary Activities | http://www.cazy.org/AA11.html |
| gene\_04897.t1 | AA11.hmm | AAs | Auxiliary Activities | http://www.cazy.org/AA11.html |
| gene\_06483.t1 | AA11.hmm | AAs | Auxiliary Activities | http://www.cazy.org/AA11.html |
| gene\_07951.t1 | AA11.hmm | AAs | Auxiliary Activities | http://www.cazy.org/AA11.html |
| gene\_01683.t1 | AA14.hmm | AAs | Auxiliary Activities | http://www.cazy.org/AA14.html |
| gene\_02162.t1 | AA16.hmm | AAs | Auxiliary Activities | http://www.cazy.org/AA16.html |
| gene\_02830.t1 | AA2.hmm | AAs | Auxiliary Activities | http://www.cazy.org/AA2.html |
| gene\_10593.t1 | AA2.hmm | AAs | Auxiliary Activities | http://www.cazy.org/AA2.html |
| gene\_09761.t1 | AA3.hmm | AAs | Auxiliary Activities | http://www.cazy.org/AA3.html |
| gene\_10298.t1 | AA3.hmm | AAs | Auxiliary Activities | http://www.cazy.org/AA3.html |
| gene\_06594.t1 | AA3\_1.hmm | AAs | Auxiliary Activities | http://www.cazy.org/AA3\_1.html |
| gene\_07061.t1 | AA3\_1.hmm | AAs | Auxiliary Activities | http://www.cazy.org/AA3\_1.html |
| gene\_00472.t1 | AA3\_2.hmm | AAs | Auxiliary Activities | http://www.cazy.org/AA3\_2.html |
| gene\_00546.t1 | AA3\_2.hmm | AAs | Auxiliary Activities | http://www.cazy.org/AA3\_2.html |
| gene\_01077.t1 | AA3\_2.hmm | AAs | Auxiliary Activities | http://www.cazy.org/AA3\_2.html |
| gene\_01974.t1 | AA3\_2.hmm | AAs | Auxiliary Activities | http://www.cazy.org/AA3\_2.html |
| gene\_03385.t1 | AA3\_2.hmm | AAs | Auxiliary Activities | http://www.cazy.org/AA3\_2.html |
| gene\_04382.t1 | AA3\_2.hmm | AAs | Auxiliary Activities | http://www.cazy.org/AA3\_2.html |
| gene\_04408.t1 | AA3\_2.hmm | AAs | Auxiliary Activities | http://www.cazy.org/AA3\_2.html |
| gene\_05272.t1 | AA3\_2.hmm | AAs | Auxiliary Activities | http://www.cazy.org/AA3\_2.html |
| gene\_05482.t1 | AA3\_2.hmm | AAs | Auxiliary Activities | http://www.cazy.org/AA3\_2.html |
| gene\_08251.t1 | AA3\_2.hmm | AAs | Auxiliary Activities | http://www.cazy.org/AA3\_2.html |
| gene\_09799.t1 | AA3\_2.hmm | AAs | Auxiliary Activities | http://www.cazy.org/AA3\_2.html |
| gene\_09802.t1 | AA3\_2.hmm | AAs | Auxiliary Activities | http://www.cazy.org/AA3\_2.html |
| gene\_09805.t1 | AA3\_2.hmm | AAs | Auxiliary Activities | http://www.cazy.org/AA3\_2.html |
|  | gene\_09906.t1 | AA3\_2.hmm | AAs | Auxiliary Activities | http://www.cazy.org/AA3\_2.html |

**Table S4 Detailed information of genes encoding CAZymes in the genome of *P. paneum* OM1 (*Continued*)**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Family** | **SeqID** | **Domain** | **Class** | **Class information** | **Domain description** |
| AAs-Total 68 | gene\_09950.t1 | AA3\_2.hmm | AAs | Auxiliary Activities | http://www.cazy.org/AA3\_2.html |
| gene\_10471.t1 | AA3\_2.hmm | AAs | Auxiliary Activities | http://www.cazy.org/AA3\_2.html |
| gene\_03728.t1 | AA3\_3.hmm | AAs | Auxiliary Activities | http://www.cazy.org/AA3\_3.html |
| gene\_06859.t1 | AA4.hmm | AAs | Auxiliary Activities | http://www.cazy.org/AA4.html |
| gene\_01904.t1 | AA5\_2.hmm | AAs | Auxiliary Activities | http://www.cazy.org/AA5\_2.html |
| gene\_00973.t1 | AA6.hmm | AAs | Auxiliary Activities | http://www.cazy.org/AA6.html |
| gene\_00184.t1 | AA7.hmm | AAs | Auxiliary Activities | http://www.cazy.org/AA7.html |
| gene\_00751.t1 | AA7.hmm | AAs | Auxiliary Activities | http://www.cazy.org/AA7.html |
| gene\_00943.t1 | AA7.hmm | AAs | Auxiliary Activities | http://www.cazy.org/AA7.html |
| gene\_01443.t1 | AA7.hmm | AAs | Auxiliary Activities | http://www.cazy.org/AA7.html |
| gene\_02044.t1 | AA7.hmm | AAs | Auxiliary Activities | http://www.cazy.org/AA7.html |
| gene\_02298.t1 | AA7.hmm | AAs | Auxiliary Activities | http://www.cazy.org/AA7.html |
| gene\_02306.t1 | AA7.hmm | AAs | Auxiliary Activities | http://www.cazy.org/AA7.html |
| gene\_03459.t1 | AA7.hmm | AAs | Auxiliary Activities | http://www.cazy.org/AA7.html |
| gene\_04704.t1 | AA7.hmm | AAs | Auxiliary Activities | http://www.cazy.org/AA7.html |
| gene\_05255.t1 | AA7.hmm | AAs | Auxiliary Activities | http://www.cazy.org/AA7.html |
| gene\_05289.t1 | AA7.hmm | AAs | Auxiliary Activities | http://www.cazy.org/AA7.html |
| gene\_06200.t1 | AA7.hmm | AAs | Auxiliary Activities | http://www.cazy.org/AA7.html |
| gene\_06895.t1 | AA7.hmm | AAs | Auxiliary Activities | http://www.cazy.org/AA7.html |
| gene\_08132.t1 | AA7.hmm | AAs | Auxiliary Activities | http://www.cazy.org/AA7.html |
| gene\_08134.t1 | AA7.hmm | AAs | Auxiliary Activities | http://www.cazy.org/AA7.html |
| gene\_08228.t1 | AA7.hmm | AAs | Auxiliary Activities | http://www.cazy.org/AA7.html |
| gene\_08309.t1 | AA7.hmm | AAs | Auxiliary Activities | http://www.cazy.org/AA7.html |
| gene\_09466.t1 | AA7.hmm | AAs | Auxiliary Activities | http://www.cazy.org/AA7.html |
| gene\_09499.t1 | AA7.hmm | AAs | Auxiliary Activities | http://www.cazy.org/AA7.html |
| gene\_09898.t1 | AA7.hmm | AAs | Auxiliary Activities | http://www.cazy.org/AA7.html |
| gene\_06301.t1 | AA8.hmm | AAs | Auxiliary Activities | http://www.cazy.org/AA8.html |
| gene\_07664.t1 | AA8.hmm | AAs | Auxiliary Activities | http://www.cazy.org/AA8.html |
| gene\_01388.t1 | AA9.hmm | AAs | Auxiliary Activities | http://www.cazy.org/AA9.html |
| gene\_03404.t1 | AA9.hmm | AAs | Auxiliary Activities | http://www.cazy.org/AA9.html |
| gene\_08882.t1 | AA9.hmm | AAs | Auxiliary Activities | http://www.cazy.org/AA9.html |
| CBMs-Total 9 | gene\_05104.t1 | CBM20.hmm | CBMs | Carbohydrate-Binding Modules | http://www.cazy.org/CBM20.html |
| gene\_03510.t1 | CBM21.hmm | CBMs | Carbohydrate-Binding Modules | http://www.cazy.org/CBM21.html |
| gene\_03433.t1 | CBM24.hmm | CBMs | Carbohydrate-Binding Modules | http://www.cazy.org/CBM24.html |
| gene\_09937.t1 | CBM24.hmm | CBMs | Carbohydrate-Binding Modules | http://www.cazy.org/CBM24.html |

**Table S4 Detailed information of genes encoding CAZymes in the genome of *P. paneum* OM1 (*Continued*)**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Family** | **SeqID** | **Domain** | **Class** | **Class information** | **Domain description** |
| CBMs-Total 9 | gene\_09937.t1 | CBM24.hmm | CBMs | Carbohydrate-Binding Modules | http://www.cazy.org/CBM24.html |
| gene\_05084.t1 | CBM43.hmm | CBMs | Carbohydrate-Binding Modules | http://www.cazy.org/CBM43.html |
| gene\_04571.t1 | CBM63.hmm | CBMs | Carbohydrate-Binding Modules | http://www.cazy.org/CBM63.html |
| gene\_02816.t1 | CBM66.hmm | CBMs | Carbohydrate-Binding Modules | http://www.cazy.org/CBM66.html |
| gene\_07142.t1 | CBM87.hmm | CBMs | Carbohydrate-Binding Modules | http://www.cazy.org/CBM87.html |
| CEs-Total 21 | gene\_04252.t1 | CE1.hmm | CEs | Carbohydrate Esterases | http://www.cazy.org/CE1.html |
| gene\_05825.t1 | CE1.hmm | CEs | Carbohydrate Esterases | http://www.cazy.org/CE1.html |
| gene\_07704.t1 | CE12.hmm | CEs | Carbohydrate Esterases | http://www.cazy.org/CE12.html |
| gene\_09115.t1 | CE12.hmm | CEs | Carbohydrate Esterases | http://www.cazy.org/CE12.html |
| gene\_00598.t1 | CE16.hmm | CEs | Carbohydrate Esterases | http://www.cazy.org/CE16.html |
| gene\_02619.t1 | CE16.hmm | CEs | Carbohydrate Esterases | http://www.cazy.org/CE16.html |
| gene\_03294.t1 | CE16.hmm | CEs | Carbohydrate Esterases | http://www.cazy.org/CE16.html |
| gene\_07142.t1 | CE18.hmm | CEs | Carbohydrate Esterases | http://www.cazy.org/CE18.html |
| gene\_07454.t1 | CE3.hmm | CEs | Carbohydrate Esterases | http://www.cazy.org/CE3.html |
| gene\_04069.t1 | CE4.hmm | CEs | Carbohydrate Esterases | http://www.cazy.org/CE4.html |
| gene\_04664.t1 | CE4.hmm | CEs | Carbohydrate Esterases | http://www.cazy.org/CE4.html |
| gene\_04675.t1 | CE4.hmm | CEs | Carbohydrate Esterases | http://www.cazy.org/CE4.html |
| gene\_06380.t1 | CE4.hmm | CEs | Carbohydrate Esterases | http://www.cazy.org/CE4.html |
| gene\_06903.t1 | CE4.hmm | CEs | Carbohydrate Esterases | http://www.cazy.org/CE4.html |
| gene\_07682.t1 | CE4.hmm | CEs | Carbohydrate Esterases | http://www.cazy.org/CE4.html |
| gene\_07991.t1 | CE4.hmm | CEs | Carbohydrate Esterases | http://www.cazy.org/CE4.html |
| gene\_02226.t1 | CE5.hmm | CEs | Carbohydrate Esterases | http://www.cazy.org/CE5.html |
| gene\_06011.t1 | CE5.hmm | CEs | Carbohydrate Esterases | http://www.cazy.org/CE5.html |
| gene\_06941.t1 | CE8.hmm | CEs | Carbohydrate Esterases | http://www.cazy.org/CE8.html |
| gene\_09474.t1 | CE8.hmm | CEs | Carbohydrate Esterases | http://www.cazy.org/CE8.html |
| gene\_09762.t1 | CE9.hmm | CEs | Carbohydrate Esterases | http://www.cazy.org/CE9.html |
| GHs-Total 180 | gene\_00394.t1 | GH1.hmm | GHs | Glycoside Hydrolases | http://www.cazy.org/GH1.html |
| gene\_02102.t1 | GH1.hmm | GHs | Glycoside Hydrolases | http://www.cazy.org/GH1.html |
| gene\_03420.t1 | GH1.hmm | GHs | Glycoside Hydrolases | http://www.cazy.org/GH1.html |
| gene\_05651.t1 | GH1.hmm | GHs | Glycoside Hydrolases | http://www.cazy.org/GH1.html |
| gene\_10598.t1 | GH10.hmm | GHs | Glycoside Hydrolases | http://www.cazy.org/GH10.html |
| gene\_03402.t1 | GH105.hmm | GHs | Glycoside Hydrolases | http://www.cazy.org/GH105.html |
| gene\_04454.t1 | GH109.hmm | GHs | Glycoside Hydrolases | http://www.cazy.org/GH109.html |
| gene\_00132.t1 | GH11.hmm | GHs | Glycoside Hydrolases | http://www.cazy.org/GH11.html |
| gene\_03912.t1 | GH114.hmm | GHs | Glycoside Hydrolases | http://www.cazy.org/GH114.html |

**Table S4 Detailed information of genes encoding CAZymes in the genome of *P. paneum* OM1 (*Continued*)**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Family** | **SeqID** | **Domain** | **Class** | **Class information** | **Domain description** |
| GHs-Total 180 | gene\_07143.t1 | GH114.hmm | GHs | Glycoside Hydrolases | http://www.cazy.org/GH114.html |
| gene\_01578.t1 | GH12.hmm | GHs | Glycoside Hydrolases | http://www.cazy.org/GH12.html |
| gene\_07226.t1 | GH12.hmm | GHs | Glycoside Hydrolases | http://www.cazy.org/GH12.html |
| gene\_06341.t1 | GH125.hmm | GHs | Glycoside Hydrolases | http://www.cazy.org/GH125.html |
| gene\_09987.t1 | GH128.hmm | GHs | Glycoside Hydrolases | http://www.cazy.org/GH128.html |
| gene\_04047.t1 | GH13\_1.hmm | GHs | Glycoside Hydrolases | http://www.cazy.org/GH13\_1.html |
| gene\_04296.t1 | GH13\_1.hmm | GHs | Glycoside Hydrolases | http://www.cazy.org/GH13\_1.html |
| gene\_05379.t1 | GH13\_1.hmm | GHs | Glycoside Hydrolases | http://www.cazy.org/GH13\_1.html |
| gene\_04297.t1 | GH13\_22.hmm | GHs | Glycoside Hydrolases | http://www.cazy.org/GH13\_22.html |
| gene\_04297.t1 | GH13\_22.hmm | GHs | Glycoside Hydrolases | http://www.cazy.org/GH13\_22.html |
| gene\_04526.t1 | GH13\_22.hmm | GHs | Glycoside Hydrolases | http://www.cazy.org/GH13\_22.html |
| gene\_04526.t1 | GH13\_22.hmm | GHs | Glycoside Hydrolases | http://www.cazy.org/GH13\_22.html |
| gene\_05380.t1 | GH13\_22.hmm | GHs | Glycoside Hydrolases | http://www.cazy.org/GH13\_22.html |
| gene\_05380.t1 | GH13\_22.hmm | GHs | Glycoside Hydrolases | http://www.cazy.org/GH13\_22.html |
| gene\_07022.t1 | GH13\_22.hmm | GHs | Glycoside Hydrolases | http://www.cazy.org/GH13\_22.html |
| gene\_07022.t1 | GH13\_22.hmm | GHs | Glycoside Hydrolases | http://www.cazy.org/GH13\_22.html |
| gene\_00709.t1 | GH13\_25.hmm | GHs | Glycoside Hydrolases | http://www.cazy.org/GH13\_25.html |
| gene\_05720.t1 | GH13\_40.hmm | GHs | Glycoside Hydrolases | http://www.cazy.org/GH13\_40.html |
| gene\_06929.t1 | GH13\_40.hmm | GHs | Glycoside Hydrolases | http://www.cazy.org/GH13\_40.html |
| gene\_09538.t1 | GH13\_40.hmm | GHs | Glycoside Hydrolases | http://www.cazy.org/GH13\_40.html |
| gene\_09942.t1 | GH13\_40.hmm | GHs | Glycoside Hydrolases | http://www.cazy.org/GH13\_40.html |
| gene\_05378.t1 | GH13\_5.hmm | GHs | Glycoside Hydrolases | http://www.cazy.org/GH13\_5.html |
| gene\_08420.t1 | GH13\_8.hmm | GHs | Glycoside Hydrolases | http://www.cazy.org/GH13\_8.html |
| gene\_00067.t1 | GH131.hmm | GHs | Glycoside Hydrolases | http://www.cazy.org/GH131.html |
| gene\_02222.t1 | GH132.hmm | GHs | Glycoside Hydrolases | http://www.cazy.org/GH132.html |
| gene\_04287.t1 | GH132.hmm | GHs | Glycoside Hydrolases | http://www.cazy.org/GH132.html |
| gene\_03835.t1 | GH135.hmm | GHs | Glycoside Hydrolases | http://www.cazy.org/GH135.html |
| gene\_07144.t1 | GH135.hmm | GHs | Glycoside Hydrolases | http://www.cazy.org/GH135.html |
| gene\_05575.t1 | GH146.hmm | GHs | Glycoside Hydrolases | http://www.cazy.org/GH146.html |
| gene\_05104.t1 | GH15.hmm | GHs | Glycoside Hydrolases | http://www.cazy.org/GH15.html |
| gene\_09783.t1 | GH15.hmm | GHs | Glycoside Hydrolases | http://www.cazy.org/GH15.html |
| gene\_02442.t1 | GH154.hmm | GHs | Glycoside Hydrolases | http://www.cazy.org/GH154.html |
| gene\_01032.t1 | GH16\_1.hmm | GHs | Glycoside Hydrolases | http://www.cazy.org/GH16\_1.html |
| gene\_03444.t1 | GH16\_1.hmm | GHs | Glycoside Hydrolases | http://www.cazy.org/GH16\_1.html |
| gene\_07562.t1 | GH16\_1.hmm | GHs | Glycoside Hydrolases | http://www.cazy.org/GH16\_1.html |
| gene\_07809.t1 | GH16\_1.hmm | GHs | Glycoside Hydrolases | http://www.cazy.org/GH16\_1.html |
| gene\_00100.t1 | GH16\_18.hmm | GHs | Glycoside Hydrolases | http://www.cazy.org/GH16\_18.html |

**Table S4 Detailed information of genes encoding CAZymes in the genome of *P. paneum* OM1 (*Continued*)**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Family** | **SeqID** | **Domain** | **Class** | **Class information** | **Domain description** |
| GHs-Total 180 | gene\_03591.t1 | GH16\_18.hmm | GHs | Glycoside Hydrolases | http://www.cazy.org/GH16\_18.html |
| gene\_06645.t1 | GH16\_18.hmm | GHs | Glycoside Hydrolases | http://www.cazy.org/GH16\_18.html |
| gene\_06726.t1 | GH16\_18.hmm | GHs | Glycoside Hydrolases | http://www.cazy.org/GH16\_18.html |
| gene\_08927.t1 | GH16\_18.hmm | GHs | Glycoside Hydrolases | http://www.cazy.org/GH16\_18.html |
| gene\_02770.t1 | GH16\_19.hmm | GHs | Glycoside Hydrolases | http://www.cazy.org/GH16\_19.html |
| gene\_07652.t1 | GH16\_2.hmm | GHs | Glycoside Hydrolases | http://www.cazy.org/GH16\_2.html |
| gene\_06149.t1 | GH16\_22.hmm | GHs | Glycoside Hydrolases | http://www.cazy.org/GH16\_22.html |
| gene\_08993.t1 | GH16\_3.hmm | GHs | Glycoside Hydrolases | http://www.cazy.org/GH16\_3.html |
| gene\_00396.t1 | GH162.hmm | GHs | Glycoside Hydrolases | http://www.cazy.org/GH162.html |
| gene\_00260.t1 | GH17.hmm | GHs | Glycoside Hydrolases | http://www.cazy.org/GH17.html |
| gene\_05610.t1 | GH17.hmm | GHs | Glycoside Hydrolases | http://www.cazy.org/GH17.html |
| gene\_08200.t1 | GH17.hmm | GHs | Glycoside Hydrolases | http://www.cazy.org/GH17.html |
| gene\_10304.t1 | GH17.hmm | GHs | Glycoside Hydrolases | http://www.cazy.org/GH17.html |
| gene\_00971.t1 | GH18.hmm | GHs | Glycoside Hydrolases | http://www.cazy.org/GH18.html |
| gene\_01647.t1 | GH18.hmm | GHs | Glycoside Hydrolases | http://www.cazy.org/GH18.html |
| gene\_01797.t1 | GH18.hmm | GHs | Glycoside Hydrolases | http://www.cazy.org/GH18.html |
| gene\_04222.t1 | GH18.hmm | GHs | Glycoside Hydrolases | http://www.cazy.org/GH18.html |
| gene\_04380.t1 | GH18.hmm | GHs | Glycoside Hydrolases | http://www.cazy.org/GH18.html |
| gene\_05417.t1 | GH18.hmm | GHs | Glycoside Hydrolases | http://www.cazy.org/GH18.html |
| gene\_05687.t1 | GH18.hmm | GHs | Glycoside Hydrolases | http://www.cazy.org/GH18.html |
| gene\_06552.t1 | GH18.hmm | GHs | Glycoside Hydrolases | http://www.cazy.org/GH18.html |
| gene\_06897.t1 | GH18.hmm | GHs | Glycoside Hydrolases | http://www.cazy.org/GH18.html |
| gene\_07875.t1 | GH18.hmm | GHs | Glycoside Hydrolases | http://www.cazy.org/GH18.html |
| gene\_09962.t1 | GH18.hmm | GHs | Glycoside Hydrolases | http://www.cazy.org/GH18.html |
| gene\_10573.t1 | GH18.hmm | GHs | Glycoside Hydrolases | http://www.cazy.org/GH18.html |
| gene\_02920.t1 | GH2.hmm | GHs | Glycoside Hydrolases | http://www.cazy.org/GH2.html |
| gene\_03424.t1 | GH2.hmm | GHs | Glycoside Hydrolases | http://www.cazy.org/GH2.html |
| gene\_03569.t1 | GH2.hmm | GHs | Glycoside Hydrolases | http://www.cazy.org/GH2.html |
| gene\_04731.t1 | GH2.hmm | GHs | Glycoside Hydrolases | http://www.cazy.org/GH2.html |
| gene\_00936.t1 | GH20.hmm | GHs | Glycoside Hydrolases | http://www.cazy.org/GH20.html |
| gene\_07473.t1 | GH20.hmm | GHs | Glycoside Hydrolases | http://www.cazy.org/GH20.html |
| gene\_01789.t1 | GH24.hmm | GHs | Glycoside Hydrolases | http://www.cazy.org/GH24.html |
| gene\_07692.t1 | GH25.hmm | GHs | Glycoside Hydrolases | http://www.cazy.org/GH25.html |
| gene\_07788.t1 | GH27.hmm | GHs | Glycoside Hydrolases | http://www.cazy.org/GH27.html |
| gene\_00523.t1 | GH28.hmm | GHs | Glycoside Hydrolases | http://www.cazy.org/GH28.html |
| gene\_00787.t1 | GH28.hmm | GHs | Glycoside Hydrolases | http://www.cazy.org/GH28.html |
|  | gene\_01725.t1 | GH28.hmm | GHs | Glycoside Hydrolases | http://www.cazy.org/GH28.html |

**Table S4 Detailed information of genes encoding CAZymes in the genome of *P. paneum* OM1 (*Continued*)**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Family** | **SeqID** | **Domain** | **Class** | **Class information** | **Domain description** |
| GHs-Total 180 | gene\_02551.t1 | GH28.hmm | GHs | Glycoside Hydrolases | http://www.cazy.org/GH28.html |
| gene\_05091.t1 | GH28.hmm | GHs | Glycoside Hydrolases | http://www.cazy.org/GH28.html |
| gene\_09475.t1 | GH28.hmm | GHs | Glycoside Hydrolases | http://www.cazy.org/GH28.html |
| gene\_00176.t1 | GH3.hmm | GHs | Glycoside Hydrolases | http://www.cazy.org/GH3.html |
| gene\_02981.t1 | GH3.hmm | GHs | Glycoside Hydrolases | http://www.cazy.org/GH3.html |
| gene\_03030.t1 | GH3.hmm | GHs | Glycoside Hydrolases | http://www.cazy.org/GH3.html |
| gene\_03630.t1 | GH3.hmm | GHs | Glycoside Hydrolases | http://www.cazy.org/GH3.html |
| gene\_04464.t1 | GH3.hmm | GHs | Glycoside Hydrolases | http://www.cazy.org/GH3.html |
| gene\_07460.t1 | GH3.hmm | GHs | Glycoside Hydrolases | http://www.cazy.org/GH3.html |
| gene\_08104.t1 | GH3.hmm | GHs | Glycoside Hydrolases | http://www.cazy.org/GH3.html |
| gene\_09452.t1 | GH3.hmm | GHs | Glycoside Hydrolases | http://www.cazy.org/GH3.html |
| gene\_09758.t1 | GH3.hmm | GHs | Glycoside Hydrolases | http://www.cazy.org/GH3.html |
| gene\_04370.t1 | GH30\_3.hmm | GHs | Glycoside Hydrolases | http://www.cazy.org/GH30\_3.html |
| gene\_01013.t1 | GH31.hmm | GHs | Glycoside Hydrolases | http://www.cazy.org/GH31.html |
| gene\_04046.t1 | GH31.hmm | GHs | Glycoside Hydrolases | http://www.cazy.org/GH31.html |
| gene\_06646.t1 | GH31.hmm | GHs | Glycoside Hydrolases | http://www.cazy.org/GH31.html |
| gene\_06681.t1 | GH31.hmm | GHs | Glycoside Hydrolases | http://www.cazy.org/GH31.html |
| gene\_07881.t1 | GH31.hmm | GHs | Glycoside Hydrolases | http://www.cazy.org/GH31.html |
| gene\_09816.t1 | GH31.hmm | GHs | Glycoside Hydrolases | http://www.cazy.org/GH31.html |
| gene\_09941.t1 | GH31.hmm | GHs | Glycoside Hydrolases | http://www.cazy.org/GH31.html |
| gene\_00950.t1 | GH32.hmm | GHs | Glycoside Hydrolases | http://www.cazy.org/GH32.html |
| gene\_01835.t1 | GH32.hmm | GHs | Glycoside Hydrolases | http://www.cazy.org/GH32.html |
| gene\_02284.t1 | GH32.hmm | GHs | Glycoside Hydrolases | http://www.cazy.org/GH32.html |
| gene\_07770.t1 | GH32.hmm | GHs | Glycoside Hydrolases | http://www.cazy.org/GH32.html |
| gene\_09695.t1 | GH32.hmm | GHs | Glycoside Hydrolases | http://www.cazy.org/GH32.html |
| gene\_02188.t1 | GH35.hmm | GHs | Glycoside Hydrolases | http://www.cazy.org/GH35.html |
| gene\_02403.t1 | GH35.hmm | GHs | Glycoside Hydrolases | http://www.cazy.org/GH35.html |
| gene\_06442.t1 | GH36.hmm | GHs | Glycoside Hydrolases | http://www.cazy.org/GH36.html |
| gene\_10343.t1 | GH37.hmm | GHs | Glycoside Hydrolases | http://www.cazy.org/GH37.html |
| gene\_07184.t1 | GH38.hmm | GHs | Glycoside Hydrolases | http://www.cazy.org/GH38.html |
| gene\_07399.t1 | GH43\_1.hmm | GHs | Glycoside Hydrolases | http://www.cazy.org/GH43\_1.html |
| gene\_09138.t1 | GH43\_13.hmm | GHs | Glycoside Hydrolases | http://www.cazy.org/GH43\_13.html |
| gene\_00119.t1 | GH43\_30.hmm | GHs | Glycoside Hydrolases | http://www.cazy.org/GH43\_30.html |
| gene\_08223.t1 | GH43\_30.hmm | GHs | Glycoside Hydrolases | http://www.cazy.org/GH43\_30.html |
| gene\_03467.t1 | GH43\_6.hmm | GHs | Glycoside Hydrolases | http://www.cazy.org/GH43\_6.html |
| gene\_03663.t1 | GH43\_6.hmm | GHs | Glycoside Hydrolases | http://www.cazy.org/GH43\_6.html |
| gene\_06731.t1 | GH43\_6.hmm | GHs | Glycoside Hydrolases | http://www.cazy.org/GH43\_6.html |

**Table S4 Detailed information of genes encoding CAZymes in the genome of *P. paneum* OM1 (*Continued*)**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Family** | **SeqID** | **Domain** | **Class** | **Class information** | **Domain description** |
| GHs-Total 180 | gene\_09125.t1 | GH43\_6.hmm | GHs | Glycoside Hydrolases | http://www.cazy.org/GH43\_6.html |
| gene\_02125.t1 | GH47.hmm | GHs | Glycoside Hydrolases | http://www.cazy.org/GH47.html |
| gene\_02421.t1 | GH47.hmm | GHs | Glycoside Hydrolases | http://www.cazy.org/GH47.html |
| gene\_02817.t1 | GH47.hmm | GHs | Glycoside Hydrolases | http://www.cazy.org/GH47.html |
| gene\_04055.t1 | GH47.hmm | GHs | Glycoside Hydrolases | http://www.cazy.org/GH47.html |
| gene\_08332.t1 | GH47.hmm | GHs | Glycoside Hydrolases | http://www.cazy.org/GH47.html |
| gene\_10310.t1 | GH47.hmm | GHs | Glycoside Hydrolases | http://www.cazy.org/GH47.html |
| gene\_05722.t1 | GH49.hmm | GHs | Glycoside Hydrolases | http://www.cazy.org/GH49.html |
| gene\_06777.t1 | GH5\_12.hmm | GHs | Glycoside Hydrolases | http://www.cazy.org/GH5\_12.html |
| gene\_01759.t1 | GH5\_15.hmm | GHs | Glycoside Hydrolases | http://www.cazy.org/GH5\_15.html |
| gene\_04322.t1 | GH5\_22.hmm | GHs | Glycoside Hydrolases | http://www.cazy.org/GH5\_22.html |
| gene\_00439.t1 | GH5\_5.hmm | GHs | Glycoside Hydrolases | http://www.cazy.org/GH5\_5.html |
| gene\_01845.t1 | GH5\_5.hmm | GHs | Glycoside Hydrolases | http://www.cazy.org/GH5\_5.html |
| gene\_02620.t1 | GH5\_5.hmm | GHs | Glycoside Hydrolases | http://www.cazy.org/GH5\_5.html |
| gene\_04755.t1 | GH5\_7.hmm | GHs | Glycoside Hydrolases | http://www.cazy.org/GH5\_7.html |
| gene\_02922.t1 | GH5\_9.hmm | GHs | Glycoside Hydrolases | http://www.cazy.org/GH5\_9.html |
| gene\_03902.t1 | GH5\_9.hmm | GHs | Glycoside Hydrolases | http://www.cazy.org/GH5\_9.html |
| gene\_05400.t1 | GH51.hmm | GHs | Glycoside Hydrolases | http://www.cazy.org/GH51.html |
| gene\_02150.t1 | GH55.hmm | GHs | Glycoside Hydrolases | http://www.cazy.org/GH55.html |
| gene\_02150.t1 | GH55.hmm | GHs | Glycoside Hydrolases | http://www.cazy.org/GH55.html |
| gene\_03332.t1 | GH55.hmm | GHs | Glycoside Hydrolases | http://www.cazy.org/GH55.html |
| gene\_10546.t1 | GH55.hmm | GHs | Glycoside Hydrolases | http://www.cazy.org/GH55.html |
| gene\_05405.t1 | GH6.hmm | GHs | Glycoside Hydrolases | http://www.cazy.org/GH6.html |
| gene\_09534.t1 | GH63.hmm | GHs | Glycoside Hydrolases | http://www.cazy.org/GH63.html |
| gene\_02877.t1 | GH64.hmm | GHs | Glycoside Hydrolases | http://www.cazy.org/GH64.html |
| gene\_02271.t1 | GH65.hmm | GHs | Glycoside Hydrolases | http://www.cazy.org/GH65.html |
| gene\_08100.t1 | GH67.hmm | GHs | Glycoside Hydrolases | http://www.cazy.org/GH67.html |
| gene\_01844.t1 | GH7.hmm | GHs | Glycoside Hydrolases | http://www.cazy.org/GH7.html |
| gene\_02670.t1 | GH7.hmm | GHs | Glycoside Hydrolases | http://www.cazy.org/GH7.html |
| gene\_02590.t1 | GH71.hmm | GHs | Glycoside Hydrolases | http://www.cazy.org/GH71.html |
| gene\_03433.t1 | GH71.hmm | GHs | Glycoside Hydrolases | http://www.cazy.org/GH71.html |
| gene\_03934.t1 | GH71.hmm | GHs | Glycoside Hydrolases | http://www.cazy.org/GH71.html |
| gene\_08861.t1 | GH71.hmm | GHs | Glycoside Hydrolases | http://www.cazy.org/GH71.html |
| gene\_09937.t1 | GH71.hmm | GHs | Glycoside Hydrolases | http://www.cazy.org/GH71.html |
| gene\_05084.t1 | GH72.hmm | GHs | Glycoside Hydrolases | http://www.cazy.org/GH72.html |
| gene\_06546.t1 | GH72.hmm | GHs | Glycoside Hydrolases | http://www.cazy.org/GH72.html |
| gene\_06968.t1 | GH72.hmm | GHs | Glycoside Hydrolases | http://www.cazy.org/GH72.html |

**Table S4 Detailed information of genes encoding CAZymes in the genome of *P. paneum* OM1 (*Continued*)**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Family** | **SeqID** | **Domain** | **Class** | **Class information** | **Domain description** |
| GHs-Total 180 | gene\_08982.t1 | GH72.hmm | GHs | Glycoside Hydrolases | http://www.cazy.org/GH72.html |
| gene\_09468.t1 | GH72.hmm | GHs | Glycoside Hydrolases | http://www.cazy.org/GH72.html |
| gene\_09807.t1 | GH72.hmm | GHs | Glycoside Hydrolases | http://www.cazy.org/GH72.html |
| gene\_03906.t1 | GH75.hmm | GHs | Glycoside Hydrolases | http://www.cazy.org/GH75.html |
| gene\_00739.t1 | GH76.hmm | GHs | Glycoside Hydrolases | http://www.cazy.org/GH76.html |
| gene\_01644.t1 | GH76.hmm | GHs | Glycoside Hydrolases | http://www.cazy.org/GH76.html |
| gene\_02791.t1 | GH76.hmm | GHs | Glycoside Hydrolases | http://www.cazy.org/GH76.html |
| gene\_03422.t1 | GH76.hmm | GHs | Glycoside Hydrolases | http://www.cazy.org/GH76.html |
| gene\_03426.t1 | GH76.hmm | GHs | Glycoside Hydrolases | http://www.cazy.org/GH76.html |
| gene\_05243.t1 | GH76.hmm | GHs | Glycoside Hydrolases | http://www.cazy.org/GH76.html |
| gene\_08370.t1 | GH76.hmm | GHs | Glycoside Hydrolases | http://www.cazy.org/GH76.html |
| gene\_08469.t1 | GH76.hmm | GHs | Glycoside Hydrolases | http://www.cazy.org/GH76.html |
| gene\_02548.t1 | GH78.hmm | GHs | Glycoside Hydrolases | http://www.cazy.org/GH78.html |
| gene\_01601.t1 | GH81.hmm | GHs | Glycoside Hydrolases | http://www.cazy.org/GH81.html |
| gene\_03839.t1 | GH84.hmm | GHs | Glycoside Hydrolases | http://www.cazy.org/GH84.html |
| gene\_00082.t1 | GH92.hmm | GHs | Glycoside Hydrolases | http://www.cazy.org/GH92.html |
| gene\_05571.t1 | GH92.hmm | GHs | Glycoside Hydrolases | http://www.cazy.org/GH92.html |
| gene\_08481.t1 | GH92.hmm | GHs | Glycoside Hydrolases | http://www.cazy.org/GH92.html |
| gene\_10612.t1 | GH92.hmm | GHs | Glycoside Hydrolases | http://www.cazy.org/GH92.html |
| gene\_02816.t1 | GH93.hmm | GHs | Glycoside Hydrolases | http://www.cazy.org/GH93.html |
| gene\_02984.t1 | GH93.hmm | GHs | Glycoside Hydrolases | http://www.cazy.org/GH93.html |
| gene\_05072.t1 | GH93.hmm | GHs | Glycoside Hydrolases | http://www.cazy.org/GH93.html |
| gene\_05650.t1 | GH95.hmm | GHs | Glycoside Hydrolases | <http://www.cazy.org/>GH95.html |
| GTs-Total 88 | gene\_00199.t1 | GT1.hmm | GTs | GlycosyTransferases | http://www.cazy.org/GT1.html |
| gene\_03179.t1 | GT1.hmm | GTs | GlycosyTransferases | http://www.cazy.org/GT1.html |
| gene\_07177.t1 | GT1.hmm | GTs | GlycosyTransferases | http://www.cazy.org/GT1.html |
| gene\_07540.t1 | GT1.hmm | GTs | GlycosyTransferases | http://www.cazy.org/GT1.html |
| gene\_07845.t1 | GT1.hmm | GTs | GlycosyTransferases | http://www.cazy.org/GT1.html |
| gene\_00571.t1 | GT109.hmm | GTs | GlycosyTransferases | http://www.cazy.org/GT109.html |
| gene\_08128.t1 | GT109.hmm | GTs | GlycosyTransferases | http://www.cazy.org/GT109.html |
| gene\_05800.t1 | GT15.hmm | GTs | GlycosyTransferases | http://www.cazy.org/GT15.html |
| gene\_08160.t1 | GT15.hmm | GTs | GlycosyTransferases | http://www.cazy.org/GT15.html |
| gene\_08395.t1 | GT15.hmm | GTs | GlycosyTransferases | http://www.cazy.org/GT15.html |
| gene\_00810.t1 | GT2\_Chitin\_synth\_1.hmm | GTs | GlycosyTransferases | http://www.cazy.org/GT2.html |
| gene\_01290.t1 | GT2\_Chitin\_synth\_1.hmm | GTs | GlycosyTransferases | http://www.cazy.org/GT2.html |
| gene\_07068.t1 | GT2\_Chitin\_synth\_1.hmm | GTs | GlycosyTransferases | http://www.cazy.org/GT2.html |

**Table S4 Detailed information of genes encoding CAZymes in the genome of *P. paneum* OM1 (*Continued*)**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Family** | **SeqID** | **Domain** | **Class** | **Class information** | **Domain description** |
| GTs-Total 88 | gene\_09106.t1 | GT2\_Chitin\_synth\_1.hmm | GTs | GlycosyTransferases | http://www.cazy.org/GT2.html |
| gene\_10650.t1 | GT2\_Chitin\_synth\_1.hmm | GTs | GlycosyTransferases | http://www.cazy.org/GT2.html |
| gene\_00224.t1 | GT2\_Chitin\_synth\_2.hmm | GTs | GlycosyTransferases | http://www.cazy.org/GT2.html |
| gene\_03570.t1 | GT2\_Chitin\_synth\_2.hmm | GTs | GlycosyTransferases | http://www.cazy.org/GT2.html |
| gene\_03571.t1 | GT2\_Chitin\_synth\_2.hmm | GTs | GlycosyTransferases | http://www.cazy.org/GT2.html |
| gene\_07068.t1 | GT2\_Chitin\_synth\_2.hmm | GTs | GlycosyTransferases | http://www.cazy.org/GT2.html |
| gene\_08876.t1 | GT2\_Chitin\_synth\_2.hmm | GTs | GlycosyTransferases | http://www.cazy.org/GT2.html |
| gene\_09106.t1 | GT2\_Chitin\_synth\_2.hmm | GTs | GlycosyTransferases | http://www.cazy.org/GT2.html |
| gene\_07227.t1 | GT2\_Glyco\_tranf\_2\_3.hmm | GTs | GlycosyTransferases | http://www.cazy.org/GT2.html |
| gene\_08318.t1 | GT2\_Glyco\_tranf\_2\_3.hmm | GTs | GlycosyTransferases | http://www.cazy.org/GT2.html |
| gene\_00808.t1 | GT2\_Glyco\_trans\_2\_3.hmm | GTs | GlycosyTransferases | http://www.cazy.org/GT2.html |
| gene\_04592.t1 | GT2\_Glycos\_transf\_2.hmm | GTs | GlycosyTransferases | http://www.cazy.org/GT2.html |
| gene\_08604.t1 | GT2\_Glycos\_transf\_2.hmm | GTs | GlycosyTransferases | http://www.cazy.org/GT2.html |
| gene\_02593.t1 | GT20.hmm | GTs | GlycosyTransferases | http://www.cazy.org/GT20.html |
| gene\_03347.t1 | GT20.hmm | GTs | GlycosyTransferases | http://www.cazy.org/GT20.html |
| gene\_06003.t1 | GT20.hmm | GTs | GlycosyTransferases | http://www.cazy.org/GT20.html |
| gene\_07341.t1 | GT20.hmm | GTs | GlycosyTransferases | http://www.cazy.org/GT20.html |
| gene\_07447.t1 | GT20.hmm | GTs | GlycosyTransferases | http://www.cazy.org/GT20.html |
| gene\_10489.t1 | GT20.hmm | GTs | GlycosyTransferases | http://www.cazy.org/GT20.html |
| gene\_04434.t1 | GT21.hmm | GTs | GlycosyTransferases | http://www.cazy.org/GT21.html |
| gene\_02233.t1 | GT22.hmm | GTs | GlycosyTransferases | http://www.cazy.org/GT22.html |
| gene\_02828.t1 | GT22.hmm | GTs | GlycosyTransferases | http://www.cazy.org/GT22.html |
| gene\_09213.t1 | GT22.hmm | GTs | GlycosyTransferases | http://www.cazy.org/GT22.html |
| gene\_10419.t1 | GT22.hmm | GTs | GlycosyTransferases | http://www.cazy.org/GT22.html |
| gene\_03162.t1 | GT24.hmm | GTs | GlycosyTransferases | http://www.cazy.org/GT24.html |
| gene\_00154.t1 | GT25.hmm | GTs | GlycosyTransferases | http://www.cazy.org/GT25.html |
| gene\_00295.t1 | GT25.hmm | GTs | GlycosyTransferases | http://www.cazy.org/GT25.html |
| gene\_09974.t1 | GT25.hmm | GTs | GlycosyTransferases | http://www.cazy.org/GT25.html |
| gene\_07867.t1 | GT3.hmm | GTs | GlycosyTransferases | http://www.cazy.org/GT3.html |
| gene\_00389.t1 | GT32.hmm | GTs | GlycosyTransferases | http://www.cazy.org/GT32.html |
| gene\_03632.t1 | GT32.hmm | GTs | GlycosyTransferases | http://www.cazy.org/GT32.html |
| gene\_04359.t1 | GT32.hmm | GTs | GlycosyTransferases | http://www.cazy.org/GT32.html |

**Table S4 Detailed information of genes encoding CAZymes in the genome of *P. paneum* OM1 (*Continued*)**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Family** | **SeqID** | **Domain** | **Class** | **Class information** | **Domain description** |
| GTs-Total 88 | gene\_08226.t1 | GT32.hmm | GTs | GlycosyTransferases | http://www.cazy.org/GT32.html |
| gene\_09623.t1 | GT32.hmm | GTs | GlycosyTransferases | http://www.cazy.org/GT32.html |
| gene\_10632.t1 | GT33.hmm | GTs | GlycosyTransferases | http://www.cazy.org/GT33.html |
| gene\_00090.t1 | GT34.hmm | GTs | GlycosyTransferases | http://www.cazy.org/GT34.html |
| gene\_10012.t1 | GT34.hmm | GTs | GlycosyTransferases | http://www.cazy.org/GT34.html |
| gene\_08743.t1 | GT35.hmm | GTs | GlycosyTransferases | http://www.cazy.org/GT35.html |
| gene\_04168.t1 | GT39.hmm | GTs | GlycosyTransferases | http://www.cazy.org/GT39.html |
| gene\_05987.t1 | GT39.hmm | GTs | GlycosyTransferases | http://www.cazy.org/GT39.html |
| gene\_07257.t1 | GT39.hmm | GTs | GlycosyTransferases | http://www.cazy.org/GT39.html |
| gene\_02462.t1 | GT4.hmm | GTs | GlycosyTransferases | http://www.cazy.org/GT4.html |
| gene\_03124.t1 | GT4.hmm | GTs | GlycosyTransferases | http://www.cazy.org/GT4.html |
| gene\_05746.t1 | GT4.hmm | GTs | GlycosyTransferases | http://www.cazy.org/GT4.html |
| gene\_06610.t1 | GT4.hmm | GTs | GlycosyTransferases | http://www.cazy.org/GT4.html |
| gene\_10302.t1 | GT48.hmm | GTs | GlycosyTransferases | http://www.cazy.org/GT48.html |
| gene\_04734.t1 | GT50.hmm | GTs | GlycosyTransferases | http://www.cazy.org/GT50.html |
| gene\_06325.t1 | GT57.hmm | GTs | GlycosyTransferases | http://www.cazy.org/GT57.html |
| gene\_06952.t1 | GT57.hmm | GTs | GlycosyTransferases | http://www.cazy.org/GT57.html |
| gene\_05817.t1 | GT58.hmm | GTs | GlycosyTransferases | http://www.cazy.org/GT58.html |
| gene\_07000.t1 | GT59.hmm | GTs | GlycosyTransferases | http://www.cazy.org/GT59.html |
| gene\_00309.t1 | GT62.hmm | GTs | GlycosyTransferases | http://www.cazy.org/GT62.html |
| gene\_06218.t1 | GT62.hmm | GTs | GlycosyTransferases | http://www.cazy.org/GT62.html |
| gene\_07098.t1 | GT62.hmm | GTs | GlycosyTransferases | http://www.cazy.org/GT62.html |
| gene\_05978.t1 | GT66.hmm | GTs | GlycosyTransferases | http://www.cazy.org/GT66.html |
| gene\_04493.t1 | GT69.hmm | GTs | GlycosyTransferases | http://www.cazy.org/GT69.html |
| gene\_09836.t1 | GT69.hmm | GTs | GlycosyTransferases | http://www.cazy.org/GT69.html |
| gene\_03572.t1 | GT71.hmm | GTs | GlycosyTransferases | http://www.cazy.org/GT71.html |
| gene\_05724.t1 | GT71.hmm | GTs | GlycosyTransferases | http://www.cazy.org/GT71.html |
| gene\_09608.t1 | GT71.hmm | GTs | GlycosyTransferases | http://www.cazy.org/GT71.html |
| gene\_10092.t1 | GT76.hmm | GTs | GlycosyTransferases | http://www.cazy.org/GT76.html |
| gene\_00661.t1 | GT8.hmm | GTs | GlycosyTransferases | http://www.cazy.org/GT8.html |
| gene\_01969.t1 | GT8.hmm | GTs | GlycosyTransferases | http://www.cazy.org/GT8.html |
| gene\_02964.t1 | GT8.hmm | GTs | GlycosyTransferases | http://www.cazy.org/GT8.html |
| gene\_04805.t1 | GT8.hmm | GTs | GlycosyTransferases | http://www.cazy.org/GT8.html |
| gene\_04999.t1 | GT8.hmm | GTs | GlycosyTransferases | http://www.cazy.org/GT8.html |
| gene\_10658.t1 | GT8.hmm | GTs | GlycosyTransferases | http://www.cazy.org/GT8.html |
| gene\_00133.t1 | GT90.hmm | GTs | GlycosyTransferases | http://www.cazy.org/GT90.html |
| gene\_01031.t1 | GT90.hmm | GTs | GlycosyTransferases | http://www.cazy.org/GT90.html |

**Table S4 Detailed information of genes encoding CAZymes in the genome of *P. paneum* OM1 (*Continued*)**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Family** | **SeqID** | **Domain** | **Class** | **Class information** | **Domain description** |
| GTs-Total 88 | gene\_02962.t1 | GT90.hmm | GTs | GlycosyTransferases | http://www.cazy.org/GT90.html |
| gene\_03298.t1 | GT90.hmm | GTs | GlycosyTransferases | http://www.cazy.org/GT90.html |
| gene\_07834.t1 | GT90.hmm | GTs | GlycosyTransferases | http://www.cazy.org/GT90.html |
| gene\_08383.t1 | GT90.hmm | GTs | GlycosyTransferases | http://www.cazy.org/GT90.html |
| gene\_08925.t1 | GT90.hmm | GTs | GlycosyTransferases | http://www.cazy.org/GT90.html |
| gene\_08941.t1 | GT90.hmm | GTs | GlycosyTransferases | http://www.cazy.org/GT90.html |
| PLs-Total 4 | gene\_08437.t1 | PL1\_4.hmm | PLs | Polysaccharide Lyases | http://www.cazy.org/PL1\_4.html |
| gene\_00945.t1 | PL1\_7.hmm | PLs | Polysaccharide Lyases | http://www.cazy.org/PL1\_7.html |
| gene\_02291.t1 | PL4\_1.hmm | PLs | Polysaccharide Lyases | http://www.cazy.org/PL4\_1.html |
| gene\_06586.t1 | PL4\_3.hmm | PLs | Polysaccharide Lyases | http://www.cazy.org/PL4\_3.html |