Table 1. Acetyl and glycosyl transferase corresponding gene and Pfam domain

| | and glycosyl transte | rase corresponding gene a | |
|---------------|----------------------|---------------------------|---------------------|
| CPS_Location | Gene | Pfam_domain | Production |
| SPC35F_0014 | wciG | PF01757.25 | Acetyl transferanse |
| SPC33C_0017 | wcyO | PF01757.25 | Acetyl transferanse |
| SPC34_0016 | wcyO | PF01757.25 | Acetyl transferanse |
| SPC47F_0015 | wciG | PF01757.25 | Acetyl transferanse |
| SPC47F_0017 | wcjE | PF01757.25 | Acetyl transferanse |
| SPC35B_0016 | wciG | PF01757.25 | Acetyl transferanse |
| | wcwC | PF08942.13 | = |
| SPC11F_0011 | | | Acetyl transferanse |
| SPC11F_0014 | wcwT | PF00132.27 | Acetyl transferanse |
| SPC33F_0016 | wciG | PF01757.25 | Acetyl transferanse |
| SPC33F_0018 | wcjE | PF01757.25 | Acetyl transferanse |
| SPC11B_0012 | wcwR | PF14602.9 | Acetyl transferanse |
| SPC11B_0015 | wcwT | PF00132.27 | Acetyl transferanse |
| SPC11D_0011 | wcwC | PF08942.13 | Acetyl transferanse |
| SPC11D_0014 | wcwT | PF00132.27 | Acetyl transferanse |
| SPC11D_0018 | wcjE | PF01757.25 | Acetyl transferanse |
| SPC47A 0018 | wcjE | PF01757.25 | Acetyl transferanse |
| SPC33D_0017 | wciG | PF01757.25 | Acetyl transferanse |
| SPC13_0018 | wciG | PF01757.25 | Acetyl transferanse |
| SPC39_0019 | | PF01757.25 | - |
| | wcyO | | Acetyl transferanse |
| SPC11A_0011 | wcwC | PF08942.13 | Acetyl transferanse |
| SPC11A_0014 | wcwT | PF00132.27 | Acetyl transferanse |
| SPC11A_0018 | wcjE | PF01757.25 | Acetyl transferanse |
| SPC10C_0016 | wciG | PF01757.25 | Acetyl transferanse |
| SPC33A_0016 | wciG | PF01757.25 | Acetyl transferanse |
| SPC33A_0018 | wcjE | PF01757.25 | Acetyl transferanse |
| SPC10F_0016 | wciG | PF01757.25 | Acetyl transferanse |
| SPC11C_0012 | wcwR | PF14602.9 | Acetyl transferanse |
| SPC11C_0015 | wcwT | PF00132.27 | Acetyl transferanse |
| SPC15B_0016 | wciZ | PF01757.25 | Acetyl transferanse |
| SPC33B_0017 | wciG | PF01757.25 | Acetyl transferanse |
| SPC42_0018 | wciG | PF01757.25 | Acetyl transferanse |
| SPC42_0010 | | PF01757.25 | = |
| | wcjE | | Acetyl transferanse |
| SPC35C_0018 | wciG | PF01757.25 | Acetyl transferanse |
| SPC35C_0020 | wcjE | PF01757.25 | Acetyl transferanse |
| SPC20_0017 | wciG | PF01757.25 | Acetyl transferanse |
| SPC20_0019 | wcjE | PF01757.25 | Acetyl transferanse |
| SPC09A_0016 | wcjD | NPH | Acetyl transferanse |
| SPC09A_0019 | wcjE | PF01757.25 | Acetyl transferanse |
| SPC09V_0015 | wcjD | NPH | Acetyl transferanse |
| SPC09V_0018 | wcjE | PF01757.25 | Acetyl transferanse |
| SPC35A 0018 | wciG | PF01757.25 | Acetyl transferanse |
| SPC35A_0020 | wcjE | PF01757.25 | Acetyl transferanse |
| SPC16F_0011 | wcxM | PF00132.27 | Acetyl transferanse |
| SPC16A_0019 | wciG | PF01757.25 | Acetyl transferanse |
| SPC18B_0015 | wciX | PF01757.25 | Acetyl transferanse |
| | | | = |
| SPC18C_0015 | wciX | PF01757.25 | Acetyl transferanse |
| SPC28F_0011 | wcxM | PF00132.27 | Acetyl transferanse |
| SPC43_0017 | wcyO | PF01757.25 | Acetyl transferanse |
| SPC43_0021 | wcjE | PF01757.25 | Acetyl transferanse |
| SPC31_0023 | wcjE | PF01757.25 | Acetyl transferanse |
| SPC15F_0016 | wciZ | PF01757.25 | Acetyl transferanse |
| SPC15F_0024 | wcjE | PF01757.25 | Acetyl transferanse |
| SPC22A_0011 | wcwC | PF08942.13 | Acetyl transferanse |
| SPC22F_0011 | wcwC | PF08942.13 | Acetyl transferanse |
| SPC18F_0011 | wcxM | PF00132.27 | Acetyl transferanse |
| SPC18F_0016 | wciX | PF01757.25 | Acetyl transferanse |
| 21 0101 _0010 | VVCI/\ | 1101101.20 | Accept dansleranse |

| SPC17F_0014 | wcrU | PF00132.27 | Acetyl transferanse |
|-----------------|------|------------|-----------------------|
| SPC28A_0011 | wcxM | PF00132.27 | Acetyl transferanse |
| | wcrU | PF14602.9 | = |
| SPC17A_0013 | | | Acetyl transferanse |
| SPC07A_0011 | wcwC | PF08942.13 | Acetyl transferanse |
| SPC07F_0011 | wcwC | PF08942.13 | Acetyl transferanse |
| SPC32F_0012 | wcyH | PF01757.25 | Acetyl transferanse |
| SPC32A_0012 | wcyH | PF01757.25 | Acetyl transferanse |
| | | | |
| SPC21_0022 | wcyO | PF01757.25 | Acetyl transferanse |
| SPC08_0009 | wciQ | PF08660.14 | Glycosyl transferanse |
| SPC08_0010 | wciR | PF04101.19 | Glycosyl transferanse |
| SPC08_0011 | wciS | PF00534.23 | Glycosyl transferanse |
| SPC08_0013 | wciT | PF04488.18 | Glycosyl transferanse |
| | wciB | PF14393.9 | |
| SPC29_0009 | | | Glycosyl transferanse |
| SPC29_0012 | wcrM | PF00535.29 | Glycosyl transferanse |
| SPC29_0013 | wcrH | NPH | Glycosyl transferanse |
| SPC35F_0008 | wciB | PF14393.9 | Glycosyl transferanse |
| SPC35F_0011 | wcrC | PF00534.23 | Glycosyl transferanse |
| SPC35F_0012 | wcrD | PF00535.29 | Glycosyl transferanse |
| | | | |
| SPC33C_0009 | wciN | PF01501.23 | Glycosyl transferanse |
| SPC33C_0011 | wcrC | PF00534.23 | Glycosyl transferanse |
| SPC33C_0012 | wcrD | PF00535.29 | Glycosyl transferanse |
| SPC33C_0013 | wciF | PF00535.29 | Glycosyl transferanse |
| SPC34_0009 | wciB | PF14393.9 | Glycosyl transferanse |
| | | | |
| SPC34_0012 | wcrC | PF00534.23 | Glycosyl transferanse |
| SPC34_0013 | wcrD | PF00535.29 | Glycosyl transferanse |
| SPC47F_0009 | wciB | PF14393.9 | Glycosyl transferanse |
| SPC47F_0012 | wcrC | PF00534.23 | Glycosyl transferanse |
| SPC47F_0013 | wcrD | PF00535.29 | Glycosyl transferanse |
| | | | |
| SPC35B_0009 | wciB | PF14393.9 | Glycosyl transferanse |
| SPC35B_0012 | wcrM | PF00535.29 | Glycosyl transferanse |
| SPC35B_0013 | wcrH | NPH | Glycosyl transferanse |
| SPC11F_0009 | wchK | PF04101.19 | Glycosyl transferanse |
| SPC11F_0010 | wcyK | PF00534.23 | Glycosyl transferanse |
| SPC11F_0012 | wcrL | PF04488.18 | Glycosyl transferanse |
| | | | |
| SPC33F_0009 | wciB | PF14393.9 | Glycosyl transferanse |
| SPC33F_0011 | wciD | PF00535.29 | Glycosyl transferanse |
| SPC33F_0012 | wciE | PF05704.15 | Glycosyl transferanse |
| SPC33F_0013 | wciF | PF00535.29 | Glycosyl transferanse |
| SPC10B_0009 | wciB | PF14393.9 | Glycosyl transferanse |
| SPC10B_0012 | wcrC | PF00534.23 | Glycosyl transferanse |
| | | | |
| SPC10B_0013 | wcrD | PF00535.29 | Glycosyl transferanse |
| SPC10B_0014 | wciF | PF00535.29 | Glycosyl transferanse |
| SPC10B_0015 | wcrG | PF02485.24 | Glycosyl transferanse |
| SPC11B_0010 | wchK | PF04101.19 | Glycosyl transferanse |
| SPC11B_0011 | wcyK | PF00534.23 | Glycosyl transferanse |
| SPC11B_0013 | wcrL | PF04488.18 | - |
| | | | Glycosyl transferanse |
| SPC11D_0009 | wchK | PF04101.19 | Glycosyl transferanse |
| SPC11D_0010 | wcyK | PF00534.23 | Glycosyl transferanse |
| SPC11D_0012 | wcrL | PF04488.18 | Glycosyl transferanse |
| SPC47A_0009 | wciB | PF14393.9 | Glycosyl transferanse |
| SPC47A_0011 | wcrC | PF00534.23 | Glycosyl transferanse |
| | | PF00534.23 | |
| SPC47A_0012 | wcyM | | Glycosyl transferanse |
| SPC47A_0014 | wcyN | PF00535.29 | Glycosyl transferanse |
| SPC47A_0015 | whaM | PF00535.29 | Glycosyl transferanse |
| SPC10A_0009 | wciB | PF14393.9 | Glycosyl transferanse |
| SPC10A_0012 | wcrC | PF00534.23 | Glycosyl transferanse |
| SPC10A 0013 | wcrD | PF00535.29 | Glycosyl transferanse |
| · - | | | |
| SPC10A_0014 | wciF | PF00535.29 | Glycosyl transferanse |
| | | | |

| SPC10A_0015 | wcrG | PF02485.24 | Glycosyl | transferanse |
|-------------|------|------------|----------|--------------|
| SPC06B_0009 | wciN | PF01501.23 | | transferanse |
| SPC06B_0012 | wciP | PF00535.29 | | transferanse |
| SPC33D_0009 | wciN | PF01501.23 | | transferanse |
| SPC33D_0011 | wcrC | PF00534.23 | | transferanse |
| SPC33D_0012 | wciD | PF00535.29 | | transferanse |
| SPC33D_0013 | wciE | PF05704.15 | | transferanse |
| SPC33D_0014 | wciF | PF00535.29 | | transferanse |
| SPC06A_0009 | wciN | PF01501.23 | | transferanse |
| SPC06A_0012 | wciP | PF00535.29 | | transferanse |
| SPC09L 0009 | wcjA | PF00534.23 | | transferanse |
| SPC09L_0012 | wcjA | NPH | | transferanse |
| SPC09L_0012 | wcjC | PF00534.23 | | transferanse |
| SPC09L_0014 | = | PF00534.23 | | |
| | wcjA | NPH | | transferanse |
| SPC09N_0012 | wcjB | | | transferanse |
| SPC09N_0014 | wcjC | PF00534.23 | | transferanse |
| SPC13_0010 | wchK | PF04101.19 | | transferanse |
| SPC13_0014 | wciF | PF00535.29 | | transferanse |
| SPC13_0015 | wcrD | PF00535.29 | | transferanse |
| SPC37_0009 | wciB | PF14393.9 | | transferanse |
| SPC37_0011 | wciD | PF00535.29 | | transferanse |
| SPC37_0012 | wciE | PF05704.15 | | transferanse |
| SPC37_0013 | wciF | PF00535.29 | Glycosyl | transferanse |
| SPC39_0009 | wciB | PF14393.9 | Glycosyl | transferanse |
| SPC39_0012 | wcrC | PF00534.23 | Glycosyl | transferanse |
| SPC39_0013 | wcrD | PF00535.29 | Glycosyl | transferanse |
| SPC39_0014 | wciF | PF00535.29 | Glycosyl | transferanse |
| SPC39_0016 | wcrG | PF02485.24 | Glycosyl | transferanse |
| SPC11A_0009 | wchK | PF04101.19 | Glycosyl | transferanse |
| SPC11A_0010 | wcyK | PF00534.23 | Glycosyl | transferanse |
| SPC11A_0012 | wcrL | PF04488.18 | | transferanse |
| SPC10C_0009 | wciB | PF14393.9 | | transferanse |
| SPC10C_0012 | wcrC | PF00534.23 | | transferanse |
| SPC10C_0013 | wcrD | PF00535.29 | | transferanse |
| SPC10C 0014 | wciF | PF00535.29 | | transferanse |
| SPC10C 0018 | wcrH | NPH | | transferanse |
| SPC33A 0009 | wciB | PF14393.9 | | transferanse |
| SPC33A_0011 | wciD | PF00535.29 | | transferanse |
| SPC33A_0012 | wciE | PF05704.15 | | transferanse |
| SPC33A_0013 | wciF | PF00535.29 | | transferanse |
| SPC15A_0010 | wchK | PF04101.19 | , , | transferanse |
| SPC15A_0012 | wchL | PF00535.29 | | transferanse |
| SPC15A_0013 | wchM | PF00535.29 | | transferanse |
| SPC15A_0014 | wchN | PF05704.15 | | transferanse |
| SPC10F_0009 | wciB | PF14393.9 | | transferanse |
| SPC10F_0009 | wcrC | PF00534.23 | | transferanse |
| SPC10F_0012 | werD | PF00535.29 | | |
| SPC10F_0013 | wciF | PF00535.29 | | transferanse |
| | wcrH | NPH | | transferanse |
| SPC11C 0010 | wchK | | | transferanse |
| SPC11C_0010 | | PF04101.19 | | transferanse |
| SPC11C_0011 | wcyK | PF00534.23 | | transferanse |
| SPC11C_0013 | wcrL | PF04488.18 | | transferanse |
| SPC19A_0010 | wchQ | PF00535.29 | | transferanse |
| SPC15B_0010 | wchK | PF04101.19 | | transferanse |
| SPC15B_0012 | wchL | PF00535.29 | | transferanse |
| SPC15B_0013 | wchM | PF00535.29 | | transferanse |
| SPC15B_0014 | wchN | PF05704.15 | | transferanse |
| SPC15C_0010 | wchK | PF04101.19 | Glycosyl | transferanse |
| | | | | |

| SPC15C_0012 | wchL | PF00535.29 | Glycosyl transferanse |
|----------------------------|------|---------------------|-----------------------|
| SPC15C_0013 | wchM | PF00535.29 | Glycosyl transferanse |
| SPC15C_0014 | wchN | PF05704.15 | Glycosyl transferanse |
| SPC33B_0009 | wciN | PF01501.23 | Glycosyl transferanse |
| SPC33B_0011 | werC | PF00534.23 | Glycosyl transferanse |
| | | | |
| SPC33B_0012 | wciD | PF00535.29 | Glycosyl transferanse |
| SPC33B_0013 | wciE | PF05704.15 | Glycosyl transferanse |
| SPC33B_0014 | wciF | PF00535.29 | Glycosyl transferanse |
| SPC36_0010 | wcjA | PF00534.23 | Glycosyl transferanse |
| SPC36_0012 | wciF | PF00535.29 | Glycosyl transferanse |
| SPC36_0016 | wcrH | NPH | Glycosyl transferanse |
| SPC42_0009 | wciB | PF14393.9 | Glycosyl transferanse |
| SPC42_0011 | wcrl | PF00535.29 | Glycosyl transferanse |
| SPC42_0013 | wcrK | PF05704.15 | Glycosyl transferanse |
| SPC42_0015 | wcrH | NPH | Glycosyl transferanse |
| SPC35C_0009 | wciB | PF14393.9 | Glycosyl transferanse |
| SPC35C_0011 | wcrl | PF00535.29 | Glycosyl transferanse |
| SPC35C_0013 | wcrK | PF05704.15 | Glycosyl transferanse |
| SPC35C_0015 | wcrH | NPH | Glycosyl transferanse |
| SPC19F_0012 | wchQ | PF00535.29 | Glycosyl transferanse |
| _ | - | | |
| SPC14_0010 | wchK | PF04101.19 | Glycosyl transferanse |
| SPC14_0012 | wchL | PF00535.29 | Glycosyl transferanse |
| SPC14_0013 | wchM | PF00535.29 | Glycosyl transferanse |
| SPC14_0014 | wchN | PF05704.15 | Glycosyl transferanse |
| SPC05_0006 | wciJ | PF00534.23 | Glycosyl transferanse |
| SPC05_0009 | whaC | PF00535.29 | Glycosyl transferanse |
| SPC05_0010 | whaD | PF00534.23 | Glycosyl transferanse |
| SPC27_0010 | whaK | PF00535.29 | Glycosyl transferanse |
| SPC27_0014 | wcyS | PF05704.15 | Glycosyl transferanse |
| SPC20_0009 | wciB | PF14393.9 | Glycosyl transferanse |
| SPC20_0011 | whaJ | PF00535.29 | Glycosyl transferanse |
| SPC20_0012 | wciL | PF00534.23 | Glycosyl transferanse |
| SPC20_0013 | wcwK | PF11380.11 | Glycosyl transferanse |
| SPC20_0014 | wciD | PF00535.29 | Glycosyl transferanse |
| SPC20_0015 | whaF | PF05704.15 | Glycosyl transferanse |
| SPC09A_0010 | wcjA | PF00534.23 | Glycosyl transferanse |
| SPC09A_0013 | wcjB | NPH | Glycosyl transferanse |
| SPC09A_0015 | wcjC | PF00534.23 | Glycosyl transferanse |
| SPC02_0010 | wchG | PF00535.29 | Glycosyl transferanse |
| SPC02_0010 | wchH | PF13692.9 | Glycosyl transferanse |
| SPC02_0011 SPC02_0013 | wchl | PF00534.23 | Glycosyl transferanse |
| | | | |
| SPC09V_0009 | wcjA | PF00534.23 | Glycosyl transferanse |
| SPC09V_0012 | wcjB | NPH DECOGGA 22 | Glycosyl transferanse |
| SPC09V_0014 | wcjC | PF00534.23 | Glycosyl transferanse |
| SPC04_0010 | wciJ | PF00534.23 | Glycosyl transferanse |
| SPC04_0012 | wciL | PF00534.23 | Glycosyl transferanse |
| SPC07B_0010 | wcwl | PF00535.29 | Glycosyl transferanse |
| SPC07B_0011 | wcwL | PF00534.23 | Glycosyl transferanse |
| SPC07B_0012 | wcwK | PF11380.11 | Glycosyl transferanse |
| SPC07B_0013 | wcxU | PF00535.29 | Glycosyl transferanse |
| SPC35A_0009 | wciB | PF14393.9 | Glycosyl transferanse |
| SPC35A_0011 | wcrl | PF00535.29 | Glycosyl transferanse |
| SPC35A_0015 | wcrH | NPH | Glycosyl transferanse |
| SPC23A_0011 | wchV | PF00535.29 | Glycosyl transferanse |
| SPC16F_0010 | wciU | PF13439.9PF00534.23 | Glycosyl transferanse |
| SPC16F_0012 | wcxN | NPH | Glycosyl transferanse |
| SPC19B_0011 | wchQ | PF00535.29 | Glycosyl transferanse |
| SPC19B_0011 SPC19B_0014 | wchS | PF00535.29 | Glycosyl transferanse |
| 01 0130 0014 | WUIJ | 1100303.28 | Orycosyr transicianse |
| | | | |

| SPC16A_0012 | wchK | PF04101.19 | Glycosyl | transferanse |
|--------------|------|--------------------------|----------|--------------|
| SPC16A_0013 | wcyK | PF00534.23 | | transferanse |
| SPC16A_0014 | wcxS | PF00535.29 | | transferanse |
| SPC16A_0017 | wciB | PF14393.9 | | transferanse |
| SPC07C_0009 | wcwl | PF00535.29 | | transferanse |
| SPC07C_0010 | wcwL | PF00534.23 | | transferanse |
| SPC07C_0011 | wcwK | PF11380.11 | | transferanse |
| SPC07C_0012 | wcxU | PF00535.29 | | transferanse |
| SPC18B_0010 | wciU | PF13439.9PF00534.23 | | transferanse |
| SPC18B_0010 | wciV | PF00535.29 | | transferanse |
| | | | | |
| SPC18B_0012 | wciW | PF05704.15 | | transferanse |
| SPC18C_0010 | wciU | PF13439.9PF00534.23 | | transferanse |
| SPC18C_0011 | wciV | PF00535.29 | | transferanse |
| SPC18C_0012 | wciW | PF05704.15 | | transferanse |
| SPC28F_0010 | wciU | PF13439.9PF00534.23 | | transferanse |
| SPC28F_0012 | wcxN | NPH | | transferanse |
| SPC18A_0010 | wciU | PF13439.9PF00534.23 | | transferanse |
| SPC18A_0011 | wciV | PF00535.29 | Glycosyl | transferanse |
| SPC18A_0012 | wciW | PF05704.15 | Glycosyl | transferanse |
| SPC24A_0016 | wcxl | PF00535.29 | Glycosyl | transferanse |
| SPC24A_0017 | wcxJ | PF00535.29 | | transferanse |
| SPC48_0013 | wcyS | PF05704.15 | | transferanse |
| SPC40_0009 | wcwl | PF00535.29 | | transferanse |
| SPC40_0010 | wcwL | PF00534.23 | | transferanse |
| SPC40_0011 | wcwK | PF11380.11PF17103.8 | | transferanse |
| SPC40_0012 | wcxU | PF00535.29 | | transferanse |
| SPC43_0009 | wciB | PF14393.9 | | transferanse |
| SPC43_0011 | wciE | PF05704.15 | | transferanse |
| SPC43_0011 | wcrC | PF00534.23 | | |
| - | | PF00534.23 PF00534.23 | | transferanse |
| SPC43_0013 | wcyM | | | transferanse |
| SPC43_0015 | wcyN | PF00535.29 | | transferanse |
| SPC43_0016 | wcrH | NPH | | transferanse |
| SPC31_0009 | wciB | PF14393.9 | | transferanse |
| SPC31_0010 | wcrP | PF00535.29 | | transferanse |
| SPC31_0011 | wcrR | PF00535.29 | | transferanse |
| SPC31_0015 | wcrX | NPH | | transferanse |
| SPC01_0011 | wchD | PF00534.23 | | transferanse |
| SPC23F_0010 | wchV | PF00535.29 | Glycosyl | transferanse |
| SPC15F_0010 | wchK | PF04101.19 | Glycosyl | transferanse |
| SPC15F_0012 | wchL | PF00535.29 | Glycosyl | transferanse |
| SPC15F_0013 | wchM | PF00535.29 | Glycosyl | transferanse |
| SPC15F_0014 | wchN | PF05704.15 | Glycosyl | transferanse |
| SPC41A_0009 | wciB | PF14393.9 | | transferanse |
| SPC41A_0010 | wcrP | PF00535.29 | | transferanse |
| SPC41A_0011 | wcrQ | PF05704.15 | | transferanse |
| SPC41A_0012 | wcrR | PF00535.29 | | transferanse |
| SPC22A_0010 | wcwA | PF00534.23 | | transferanse |
| SPC22A_0013 | wcwV | PF00534.23 | | transferanse |
| SPC22A_0014 | whaB | PF00535.29 | | transferanse |
| SPC22F_0010 | wcwA | PF00534.23 | | transferanse |
| SPC22F_0013 | wcwV | | | |
| | | PF00534.23 | | transferanse |
| SPC22F_0014 | whaB | PF00535.29 | | transferanse |
| SPC18F_0010 | wciU | PF13439.9PF00534.23 | | transferanse |
| SPC18F_0012 | wciV | PF00535.29 | | transferanse |
| SPC18F_0013 | wciW | PF05704.15 | | transferanse |
| SPC17F_0012 | wciP | PF00535.29 | | transferanse |
| SPC17F_0016 | wcrV | PF05704.15 | | transferanse |
| SPC41F_0008 | wciB | PF14393.9 | Glycosyl | transferanse |
| | | | | |

| SPC41F_0009 | wcrP | PF00535.29 | Glycosyl | transferanse |
|--------------|-------------|---------------------|----------|--------------|
| SPC41F_0010 | wcrQ | PF05704.15 | Glycosyl | transferanse |
| SPC41F_0011 | wcrR | PF00535.29 | Glycosyl | transferanse |
| SPC41F_0015 | wcrX | NPH | | transferanse |
| SPC28A_0010 | wciU | PF13439.9PF00534.23 | | transferanse |
| SPC28A_0012 | wcxN | NPH | | transferanse |
| SPC23B_0011 | wchV | PF00535.29 | | transferanse |
| | | PF14393.9 | | |
| SPC17A_0008 | wciB | | | transferanse |
| SPC17A_0009 | wcrP | PF00535.29 | | transferanse |
| SPC17A_0010 | wcrQ | PF05704.15 | | transferanse |
| SPC17A_0011 | wcrR | PF00535.29 | | transferanse |
| SPC17A_0014 | wcrV | PF05704.15 | Glycosyl | transferanse |
| SPC12B_0009 | wciJ | PF00534.23 | Glycosyl | transferanse |
| SPC12B_0010 | wcxB | PF13439.9PF00534.23 | Glycosyl | transferanse |
| SPC12B_0012 | wcxD | PF00534.23 | | transferanse |
| SPC12B_0013 | wcxE | PF00534.23 | | transferanse |
| SPC12B_0014 | wcxF | PF00534.23 | | transferanse |
| SPC12F_0009 | wciJ | PF00534.23 | | transferanse |
| SPC12F 0010 | wcxB | PF13439.9PF00534.23 | | |
| _ | | | | transferanse |
| SPC12F_0012 | wcxD | PF00534.23 | | transferanse |
| SPC12F_0013 | wcxE | PF00534.23 | | transferanse |
| SPC12F_0014 | wcxF | PF00534.23 | | transferanse |
| SPC24B_0016 | wcxl | PF00535.29 | | transferanse |
| SPC24B_0017 | wcxJ | PF00535.29 | Glycosyl | transferanse |
| SPC07A_0010 | wcwA | PF00534.23 | Glycosyl | transferanse |
| SPC07A_0014 | wcwF | PF00535.29 | Glycosyl | transferanse |
| SPC07A_0015 | wcwG | NPH | Glycosyl | transferanse |
| SPC07A_0016 | wcwH | PF00534.23 | | transferanse |
| SPC44_0009 | wciJ | PF00534.23 | | transferanse |
| SPC44_0010 | wcxB | PF13439.9PF00534.23 | | transferanse |
| SPC44_0012 | wcxD | PF00534.23 | | transferanse |
| SPC44_0013 | wcxE | PF00534.23 | | transferanse |
| SPC44_0014 | wcxF | PF00534.23 | | transferanse |
| SPC07F_0010 | wcwA | PF00534.23 | | |
| SPC07F 0014 | | | | transferanse |
| - | wcwF | PF00535.29 | | transferanse |
| SPC07F_0015 | wcwG | NPH | | transferanse |
| SPC07F_0016 | wcwH | PF00534.23 | | transferanse |
| SPC24F_0015 | wcxl | PF00535.29 | | transferanse |
| SPC24F_0016 | wcxJ | PF00535.29 | | transferanse |
| SCP46_0010 | wciJ | PF00534.23 | Glycosyl | transferanse |
| SCP46_0011 | wcxB | PF13439.9PF00534.23 | Glycosyl | transferanse |
| SCP46_0013 | wcxD | PF00534.23 | Glycosyl | transferanse |
| SCP46_0014 | wcxE | PF00534.23 | Glycosyl | transferanse |
| SCP46_0015 | wcxF | PF00534.23 | | transferanse |
| SPC32F_0015 | wchQ | PF00535.29 | | transferanse |
| SPC32F_0017 | wcyS | PF05704.15 | | transferanse |
| SPC32A_0015 | wchQ | PF00535.29 | | transferanse |
| SPC32A_0017 | wcyS | PF05704.15 | | transferanse |
| | | | | |
| SPC21_0010 | wcwA | PF00534.23 | | transferanse |
| SPC21_0011 | wcwK | PF11380.11PF17102.8 | | transferanse |
| SPC21_0013 | wcyU | PF00535.29 | | transferanse |
| SPC19C_0011 | wchQ | PF00535.29 | | transferanse |
| SPC19C_0014 | wchS | PF00535.29 | | transferanse |
| SPC19C_0018 | wchU | PF00534.23 | Glycosyl | transferanse |
| SPC12A_0011 | wciJ | PF00534.23 | Glycosyl | transferanse |
| SPC12A_0012 | wcxB | PF13439.9PF00534.23 | | transferanse |
| SPC12A_0014 | wcxD | PF00534.23 | | transferanse |
| SPC12A 0015 | wcxE | PF00534.23 | | transferanse |
| | · · · · · · | | - | 2 |

| SPC12A_0016 | wcxF | PF00534.23 | Glycosyl transferanse |
|-------------|------|--------------------|-----------------------|
| SPC45_0009 | wciJ | PF00534.23 | Glycosyl transferanse |
| SPC45_0010 | wcxB | PF13439.9PF13692.9 | Glycosyl transferanse |
| SPC45_0011 | wciL | PF00534.23 | Glycosyl transferanse |
| SPC45_0013 | wcxS | PF00535.29 | Glycosyl transferanse |
| SPC25F_0012 | wcyA | PF00534.23 | Glycosyl transferanse |
| SPC25F_0014 | wcyB | PF00535.29 | Glycosyl transferanse |
| SPC25F_0015 | wcyC | PF00534.23 | Glycosyl transferanse |
| SPC25F_0016 | wcyD | PF20330.1 | Glycosyl transferanse |
| SPC25A_0012 | wcyA | PF00534.23 | Glycosyl transferanse |
| SPC25A_0014 | wcyB | PF00535.29 | Glycosyl transferanse |
| SPC25A_0015 | wcyC | PF00534.23 | Glycosyl transferanse |
| SPC25A_0016 | wcyD | PF20330.1 | Glycosyl transferanse |
| SPC38_0013 | wcyA | PF00534.23 | Glycosyl transferanse |
| SPC38_0015 | wcyB | PF00535.29 | Glycosyl transferanse |
| SPC38_0016 | wcyC | PF00534.23 | Glycosyl transferanse |
| SPC38_0017 | wcyD | PF20330.1 | Glycosyl transferanse |
| SPC38_0018 | wcyV | PF14305.9 | Glycosyl transferanse |