

T-COFFEE, dev_uciel@20151008_17:27 (dev_uciel@20151008_17:27)

Cedric Nôtre dame

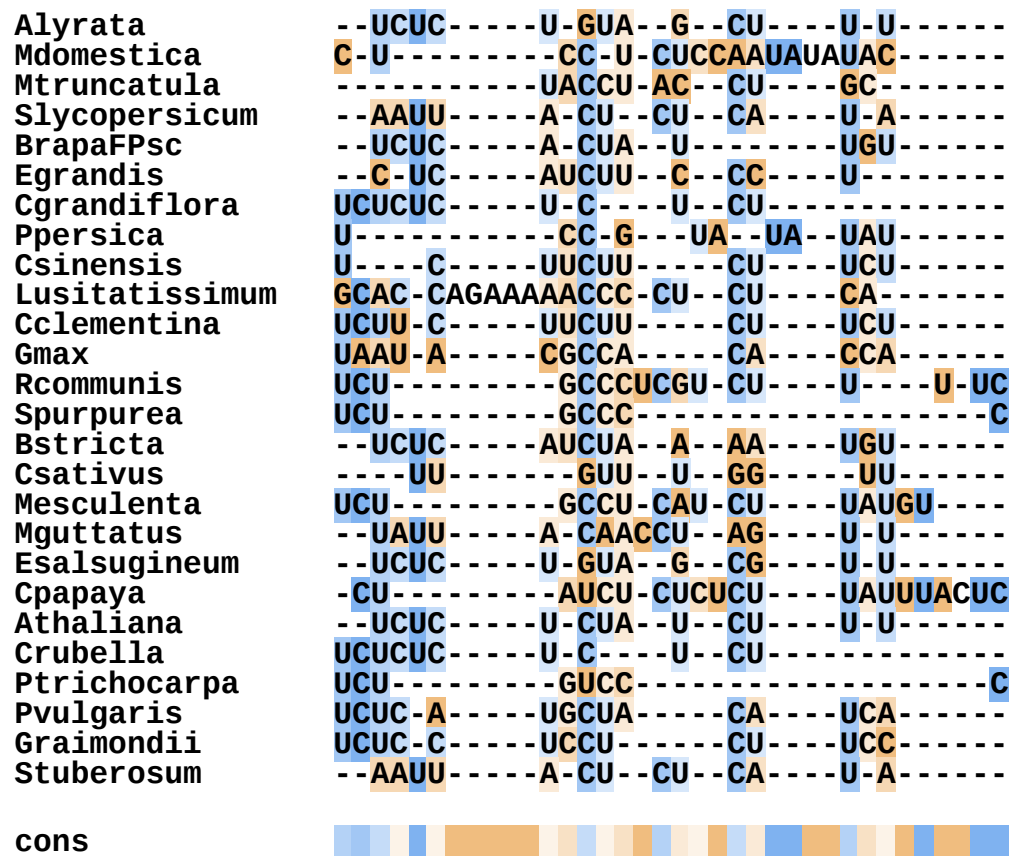
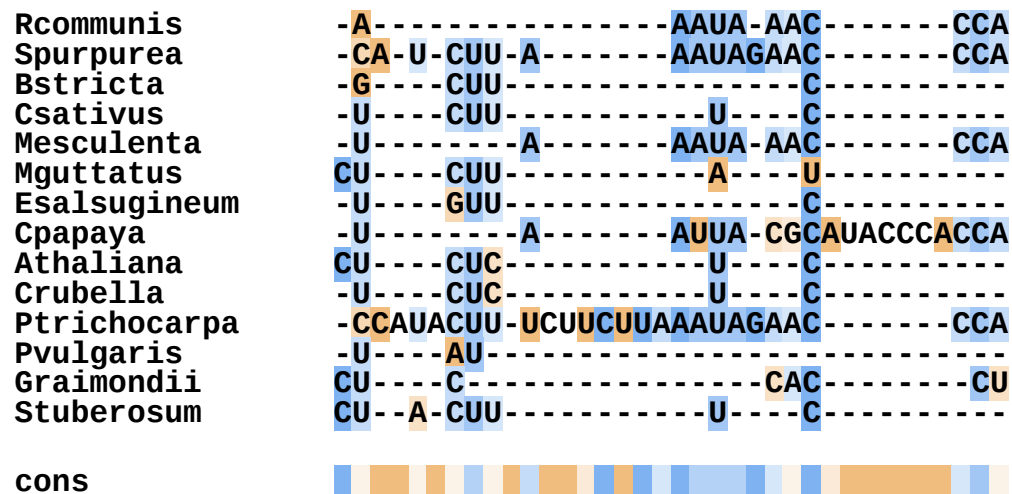
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BAD **AVG** **GOOD**

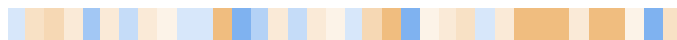
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[illegible]



| | | | | | | | | | | | | | | | | | |
|----------------|-------|-----|-----|--------|-----|-----|-----|---------|-----|------------|-----|-------|-----|--------|-----|-----|-----|
| Alyrata | --- | U | - | CUCUC | - | UA | - | C | --- | AGA | - | --- | --- | --- | | | |
| Mdomestica | --- | G | - | UA | - | CG | - | UU | --- | - | A | --- | --- | --- | | | |
| Mtruncatula | --- | U | - | GC | - | CC | - | UU | - | U | --- | G | --- | GCUGUC | | | |
| Slycopersicum | --- | U | - | CUACC | - | CUA | - | C | --- | ACC | U | --- | --- | UU | | | |
| BrapaFPsc | --- | U | - | CUAUC | G | CUC | - | U | --- | AGG | - | --- | --- | --- | | | |
| Egrandis | --- | U | - | CC | - | UC | - | GC | - | C | --- | AGUGC | --- | GGUC | | | |
| Cgrandiflora | --- | --- | --- | CUC | - | UC | - | U | --- | --- | --- | --- | --- | --- | | | |
| Ppersica | --- | U | - | UA | - | UG | - | UU | --- | - | A | --- | --- | --- | | | |
| Csinensis | --- | U | - | CU | - | UC | - | UU | - | C | --- | --- | G | - | A | - | |
| Lusitatissimum | --- | U | - | CC | - | CC | - | AU | - | C | --- | G | --- | --- | A | - | |
| Cclementina | --- | U | - | CU | - | UC | - | UU | - | C | --- | --- | G | - | A | - | |
| Gmax | --- | --- | --- | CA | - | U | --- | --- | --- | --- | --- | --- | --- | --- | G | - | |
| Rcommunis | AUAUU | - | CU | - | UC | --- | --- | U | - | U | - | C | - | AGAU | --- | --- | |
| Spurpurea | CAUAU | - | CU | - | AC | --- | --- | UCUCC | - | AGGGA | --- | --- | --- | --- | --- | --- | |
| Bstricta | --- | U | - | CUCUC | - | UG | - | U | --- | AGC | --- | --- | --- | --- | --- | --- | |
| Csativus | --- | UC | - | U | - | UA | - | U | - | C | --- | AGA | --- | --- | --- | --- | |
| Mesculenta | - | CUA | --- | --- | --- | U | --- | UGUCG | - | AAAAAA | --- | --- | --- | --- | --- | --- | |
| Mguttatus | --- | U | - | CUCUU | - | U | - | C | --- | AUGU | --- | --- | --- | --- | GUG | --- | |
| Esalsugineum | --- | GC | - | U | - | UU | - | UC | - | U | --- | --- | --- | --- | --- | --- | |
| Cpapaya | CCCUU | - | UG | - | G | --- | --- | CCUCUU | AAA | UAC | --- | --- | --- | --- | --- | --- | |
| Athaliana | --- | U | - | UCCAUC | - | UU | - | A | - | A | - | AGA | --- | --- | --- | --- | |
| Crubella | --- | --- | --- | CUC | - | UC | - | U | --- | --- | --- | --- | --- | --- | --- | --- | |
| Ptrichocarpa | CA | --- | --- | --- | --- | --- | --- | A | --- | GG | - | A | --- | --- | --- | --- | |
| Pvulgaris | --- | --- | CA | - | UC | - | UU | - | A | --- | --- | --- | --- | A | - | A | - |
| Graimondii | --- | U | - | CU | - | UC | - | UUUAAAU | - | AGGAGAACCU | --- | --- | --- | A | - | --- | |
| Stuberosum | --- | U | - | CUACC | - | CCA | - | C | --- | AC | --- | --- | --- | --- | --- | U | --- |

cons



| | | | | | | | | | | | | | | |
|----------------|------|-----|-----|----------|------|---------|------------|-----|-----|-------|-----|------|-----|-----|
| Alyrata | - | UA | - | ACCCUUU | - | --- | --- | UUG | - | CU | --- | C | --- | --- |
| Mdomestica | - | UCG | --- | --- | --- | CUGU | - | C | --- | CAUC | --- | U | --- | --- |
| Mtruncatula | AUCC | --- | --- | --- | --- | AUC | - | UU | --- | AUUA | --- | C | --- | --- |
| Slycopersicum | - | UU | - | UUUUCUU | --- | --- | --- | UU | --- | UUCG | - | U | --- | --- |
| BrapaFPsc | - | UU | - | UUCGCUUU | AUCU | - | UUUGUUCUCU | --- | --- | --- | --- | U | --- | --- |
| Egrandis | - | UU | - | GUGUGUUU | --- | --- | CUG | --- | U | --- | GU | --- | --- | --- |
| Cgrandiflora | - | UU | - | CUCUCUU | --- | --- | UC | --- | UU | --- | U | --- | --- | --- |
| Ppersica | - | UCG | --- | --- | --- | CUGU | - | C | --- | CAUC | --- | U | --- | --- |
| Csinensis | - | UCG | --- | --- | --- | AUCU | - | U | --- | CACU | --- | U | --- | --- |
| Lusitatissimum | - | UCC | --- | --- | --- | CUAUCUA | --- | U | --- | UUAU | --- | U | --- | --- |
| Cclementina | - | UCG | --- | --- | --- | AUCU | - | U | --- | CACU | --- | U | --- | --- |
| Gmax | - | C | --- | --- | --- | UUU | - | C | --- | CCUUC | --- | ACUU | --- | --- |
| Rcommunis | - | UUG | --- | --- | --- | CUAUUU | --- | --- | --- | CACU | --- | U | --- | --- |
| Spurpurea | - | UUG | --- | --- | --- | CUAC | - | UU | --- | CUCU | --- | C | --- | --- |

| | |
|--------------|--|
| Bstricta | -UU-CUCUCUUU-----UUG-----CU-----U----- |
| Csativus | -UCACUCCAUG-----GUGGU--UU-----C----- |
| Mesculenta | -UUG-----AU-----UU----- |
| Mguttatus | -U--GUGUGUG-----UG-----UGUG--U----- |
| Esalsugineum | -UU-UUCCCC-----U-----U----- |
| Cpapaya | -----AA-----CCCA-----U----- |
| Athaliana | -AA--ACCCUUU-----UUG--CU-----C----- |
| Crubella | -UU-CUCUCUU-----UC-----UU-----U----- |
| Ptrichocarpa | -UUG-----UUAU-UA-----CUCU-----C----- |
| Pvulgaris | -UAG-----CCCA--C--ACCACA-----UAC-- |
| Graimondii | -UCA-----ACCC--U--AGU-----U----- |
| Stuberosum | -UU-UUUUUGU-----UG-----UUGUUGU----- |

| | |
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| cons |  |
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| | |
|----------------|------------------------------------|
| Alyrata | -CUU-AA---UGUGUGAGU---A---CC-UC--U |
| Mdomestica | -CUAUCUGU-U--UCU-----GUG--U--UAGAA |
| Mtruncatula | -CUU-AAUG-C--U-----U--CUU--GUU |
| Slycopersicum | -GUG-UA-U-AU--AUUUUA--AG--GCCUCUUA |
| BrapaFPsc | -CUU-UU-----AUUUUGA--AA--CACUUUUU |
| Egrandis | -CGC-GC--AC--GGCAC--A--CGC----- |
| Cgrandiflora | -CUC-AA-----GAAAAAAAA--CCCUUUUU |
| Ppersica | -CUUUGCCC-A--GCU-----GAG--C--UCAAA |
| Csinensis | -CUU-AAAA-AUAUA-----UA--CAAGCGUU |
| Lusitatissimum | -CUU-GAUU-CAUA-----A--CUAGUGCU |
| Cclementina | -CUU-AAAA-AUAUA-----UA--CAAGCGUU |
| Gmax | UCUU-CCUUGUAUUG-----GUAGCCCAAACAAA |
| Rcommunis | -----UCU--UCUCU-----AUC--CGCUCUUAU |
| Spurpurea | -----UAG-CUGUCU-----GUC--UUCUUGU |
| Bstricta | -CUC-AA-----GAAA--A--CCCUUG-U |
| Csativus | -CUG-UU-----GAAA--A--UU--U |
| Mesculenta | -CUGUCGCC-UUCUUU-----GAG--U--UCUUU |
| Mguttatus | -GUG-U-----UGU--AG--UUUUUGUU |
| Esalsugineum | -CUU-UU--AUGUG-GAAA--A--CCCUU--U |
| Cpapaya | -CUGCCCC-UUC-----C--UCUAA |
| Athaliana | -CUU-AA-----GGUGU--A--CC-UC--U |
| Crubella | -CUC-AA-----GAAAA--AC--CCCUUUUU |
| Ptrichocarpa | -----UAG-CUGUCU-----GUU--UUCUUGU |
| Pvulgaris | -CUU-CUCU-UCAUU-----GU--CUCUCUUU |
| Graimondii | -CUU-AUUG-UCAUU-----UA--CACUCUUU |
| Stuberosum | -GUG-U--AU--AUUUUA--AG--GCCUUUUU |

| | |
|------|--|
| cons |  |
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|----------------|-----------------------------------|
| Alyrata | C-AAU-----AU-UACA--UUCG----A-CAG |
| Mdomestica | -----GAAUUGU--A----- |
| Mtruncatula | U-CAU-----AUGUUGU--UGAUGAUUCU-A- |
| Slycopersicum | U-----UU-CUUU--UUCG----A-AA- |
| BrapaFPsc | G-CUC-----CU-UGCC--GUAUA----UAA |
| Egrandis | --GAG-----GA-GACC--UGCG----CUCCU |
| Cgrandiflora | C-CAU-----AU-UACA--GUCGG--A-CAG |
| Ppersica | CAUAAG----GGAGGGAGAA--GG----- |
| Csinensis | G-CAC-----AUGUGCC--UUCU----CU-A- |
| Lusitatissimum | G-UGG-----UGGUG-----UGUUACU-A- |
| Cclementina | G-CAC-----AUGUGCC--UUCU----CU-A- |
| Gmax | A-CCCC-----A-AUCUGAC--UU-U-----G- |
| Rcommunis | ---CUAC--CUAUCUG-----UUC----- |
| Spurpurea | ---CUG--UGUCUGCGCC--UUC----- |
| Bstricta | C-GAU-----AU-UACA--UUCG----A-CAG |
| Csativus | G-AAG-----U--UU---A--UUCA--A-GGG |
| Mesculenta | C-UAUG----CGUUUAUGUCGUCCUC----- |
| Mguttatus | G-A-----AU-CUUG--UGGU----A-UA- |
| Esalsugineum | C-UUG-----CU-CCUA--UUCG----A-CGG |
| Cpapaya | CAUGUCCUCUCGUCUCUGC--UCUUC----- |
| Athaliana | C-GAU-----GU-UACA--UUCG----A-CAG |
| Crubella | C-CAU-----AU-UACA--GUCGG--A-CAG |
| Ptrichocarpa | ---UUG--UGUCUGUGCC--UUC----- |
| Pvulgaris | G-CUU-----GUAUGAU--UUCU----UC-U- |
| Graimondii | C-CU-----CUUCCCC--UCC-----U- |
| Stuberosum | U-----UU-CGUU--UUCG----A-GAA |

cons



| | |
|----------------|-------------------------------------|
| Alyrata | AA--A-G--GAAAUGAGU--GAAG-----UUU- |
| Mdomestica | -----UGCGU--GGGU-----CUC- |
| Mtruncatula | -C--CA-----UA-UA--UAUGU-GC--ACAC |
| Slycopersicum | ---A-G--AAGAUGAAGAAAAAA--AU-- |
| BrapaFPsc | -A--A-G--GUAAA--GU----- |
| Egrandis | CG--CUGUAGUAGUGC-U--GAAC-A----CG- |
| Cgrandiflora | AA--A-G--CAAAUGAGU--GAGU-GUUUUU--U- |
| Ppersica | -----GUCGU--GAAU-----AA-- |
| Csinensis | -C---AA-----UG-GU--UAAUUCGU--ACA- |
| Lusitatissimum | -C-----UCAGUCUU--UCUG |
| Cclementina | -C---AA-----UG-GU--UAAUUUGU--ACA- |
| Gmax | -C--GA-----UG-UU--UCAACGGC--GACUC |
| Rcommunis | -G--UA-----UG-GU--GAAU-----ACA- |
| Spurpurea | -C--AG-----UG-GU--GAAU-----AC-- |
| Bstricta | AA--A-G--GAAAUGAGU--GAAU-----UUU- |
| Csativus | AAAAA-U-CAUAUA-----A-----U-- |
| Mesculenta | -C--AG-----UG-GU--GAAU-----AC-- |

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|--------------|------|------|-----------|-----------|--------------|---------|------|
| Mguttatus | ---- | A-G- | GGUCUGAG | GGUCGAAG | ----- | UUG- | |
| Esalsugineum | AA-- | A-A- | GAAA-GAGU | ---GAAA- | ----- | AAG- | |
| Cpapaya | -A-- | AA- | ----- | UG-GU | ---GAAU- | ----- | CC-- |
| Athaliana | AA-- | A-G- | GAAAUGAGU | ---GAUU- | ----- | UGU- | |
| Crubella | AA-- | A-G- | CAAAUGAGU | ---GAGU- | GUUUUUUUU- | | |
| Ptrichocarpa | -C-- | AG- | ----- | UG-GU | ---GAAU- | ----- | AC-- |
| Pvulgaris | -C-- | A- | ----- | UG-CU | ---UCUCUCUC- | ---UCUC | |
| Graimondii | -C-- | UG- | ----- | CG-GU | ---GAAA- | ----- | CA- |
| Stuberosum | GA-- | A-G- | AAG- | ---AAGAAA | AAAA- | ----- | AUG- |

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| cons | |
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| | | | | | | | | |
|----------------|--------|--------|-------|--------|---------|---------------|-----------|------|
| Alyrata | ---- | UU- | ----- | G- | ----- | G- | GAUCUUUA | AUC- |
| Mdomestica | ---- | GUAGCU | AGCU | --- | CUG- | UA-AA- | ----- | C- |
| Mtruncatula | ---- | AG- | --- | AUGAAU | UUAGCU- | UAA-CU- | -G-G- | |
| Slycopersicum | ---- | ----- | A- | ----- | U- | GAAGAUUA | AUA | |
| BrapaFPsc | ---- | -U- | ----- | U- | ----- | G- | GAUCGUUA | ACC- |
| Egrandis | ---- | GC- | ----- | G- | ----- | C- | GAUGGUUU- | C- |
| Cgrandiflora | ---- | UUU- | ----- | U- | ----- | G- | GAUCUUUA | AGC- |
| Ppersica | ---- | -UGCAA | ACAA- | --- | CAG- | UGCAC- | AG-- | G-C- |
| Csinensis | ---- | UAU- | ----- | A-UU- | --- | CAA-G- | GCC-AG- | G-C- |
| Lusitatissimum | ---- | AU- | ----- | CUCC- | U- | ----- | C-UU- | A-G- |
| Cclementina | ---- | UAU- | ----- | A-UA- | --- | CAA-G- | GCC-AG- | G-C- |
| Gmax | AAAAGC | --- | A-AA- | --- | GCCCG- | GAC-AU- | -A-G- | |
| Rcommunis | ---- | AU- | ----- | A- | ----- | GGGAC- | AU-- | G-G- |
| Spurpurea | ---- | -U- | ----- | A- | ----- | G-GAC- | AGCCA- | G- |
| Bstricta | ---- | UUU- | ----- | U- | ----- | G-GAUCUUUA | AACC- | |
| Csativus | ---- | -U- | ----- | U- | ----- | G-AAG- | A--- | CC- |
| Mesculenta | ---- | -A- | ----- | A- | ----- | GGGACCAU- | | |
| Mguttatus | ---- | ----- | C- | ----- | U- | GGUGUUUGAUGA | | |
| Esalsugineum | ---- | UU- | ----- | U- | ----- | G-GAUCUUUA | AAC- | |
| Cpapaya | ---- | -A- | ----- | | ----- | | | |
| Athaliana | ---- | UUU- | ----- | U- | ----- | G-GAUCUUUA | AACC- | |
| Crubella | ---- | UUU- | ----- | U- | ----- | G-GAUCUUUA | AACC- | |
| Ptrichocarpa | ---- | -U- | ----- | A- | ----- | G-GAC-AGCUA- | G- | |
| Pvulgaris | ---- | UCU- | ----- | C-UC- | --- | UCUCU-UUC-UU- | -G-G- | |
| Graimondii | ---- | CA- | ----- | A- | ----- | G-GAC-UG- | -U-U- | |
| Stuberosum | ----- | -A- | ----- | | ----- | U-GAAGAUUA | AUA | |

| | |
|------|--|
| cons | |
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| | | | | | | | |
|-------------|------|-------|---------|----|------------|----|---------|
| Alyrata | UU-- | UU- | ----- | U- | UGAUCAUGC- | G- | GGUUUG- |
| Mdomestica | GU-- | GG-A- | ----- | U- | GAUCACGU- | G- | GGUUUC- |
| Mtruncatula | A- | ----- | UC-U-U- | | GUUCAUGU- | G- | GGCUUA- |

| | | | | | |
|--------------|------|-------------------|--------------|--------------|-----|
| Athaliana | ---- | ACAAAAGAGUCUCUUA- | CAGAGAUCUUU- | GGC | |
| Crubella | ---- | ACAAAAGAGUCUCUUA- | CAGAGAUCUUU- | GGC | |
| Ptrichocarpa | ---- | GCAAA- | GGGUUUCUUA- | CAGAGUUUAUU- | GGC |
| Pvulgaris | ---- | ACAAA- | GGGUUCUUA- | CAGAGUUUCUU- | GGC |
| Graimondii | ---- | GCAAA- | GGGUUCUUA- | CAGAGUUCAUU- | GGC |
| Stuberosum | ---- | ACAAA- | GGGUUUCUUA- | CAGAGUUCAUU- | GGC |

| | | | | | | | | | | |
|------|--|-------|--|--|--|---|------|---|----|-----|
| cons | | **.** | | | | * | **** | * | ** | *** |
|------|--|-------|--|--|--|---|------|---|----|-----|

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|----------------|----------------|--------------|--------------|----------|----|
| Alyrata | AUUCUGUCCACCUC | -U-CUC | --UCUA | --UAUG | -- |
| Mdomestica | AUUCUGUCCACCUC | -U-CUU | --UCU | --UCGA | -- |
| Mtruncatula | AUUCUGUCCACCUC | -A-CUU | --CCUC | --UCUCUC | |
| Slycopersicum | AUUCUGUCCACCUC | -CUCGU | --UCUUU | -- | |
| BrapaFPsc | AUUCUGUCCACCUC | -U-UUC | --UGAA | --UAUA | -- |
| Egrandis | AUUCUGUCCACCUC | -U-CCU | --CCUA | --CAUC | -- |
| Cgrandiflora | AUUCUGUCCACCUC | -U-CUC | --UCUA | --UAUA | -- |
| Ppersica | AUUCUGUCCACCUC | -U-CUC | --UUU | --U | -- |
| Csinensis | AUUCUGUCCACCUC | -G-UUC | --CCCA | --UCGAUU | |
| Lusitatissimum | AUUCUGUCCACCUC | -C-CUA | --CUA | --CGUACG | |
| Cclementina | AUUCUGUCCACCUC | -G-UUC | --CCCA | --UCGAUU | |
| Gmax | AUUCUGUCCACCUC | -A-CU | --UCU | -- | UG |
| Rcommunis | AUUCUGUCCACCUC | -U-UUA | --UCA | --UAGA | -- |
| Spurpurea | AUUCUGUCCACCUC | -A-AUC | --U--A | --UGGA | -- |
| Bstricta | AUUCUGUCCACCUC | -U-CUC | --UCUA | --UAUA | -- |
| Csativus | AUUCUGUCCACCUC | -C-CUCCUUUCU | CAAAUC | -- | |
| Mesculenta | AUUCUGUCCACCUC | -C-AUC | --U--A | --UGGA | -- |
| Mguttatus | AUUCUGUCCACCUC | -U-G-C | --UCUAUAUGGA | -- | |
| Esalsugineum | AUUCUGUCCACCUC | -U-CUC | --UAU | --UAUA | -- |
| Cpapaya | AUUCUGUCCACCUC | -A-CUG | --CGCA | --UCGA | -- |
| Athaliana | AUUCUGUCCACCUC | -U-CUC | --UCUA | --UAU | -- |
| Crubella | AUUCUGUCCACCUC | -U-CUC | --UCUA | --UAUA | -- |
| Ptrichocarpa | AUUCUGUCCACCUC | -U-AUC | --U--U | --UAGA | -- |
| Pvulgaris | AUUCUGUCCACCUC | -A-CU | --UCCA | --UUAAUG | |
| Graimondii | AUUCUGUCCACCUC | GCA-CUA | --UC-A | --UA | -- |
| Stuberosum | AUUCUGUCCACCUC | -CUCGU | --UCUUU | -- | |

| | | | | | | | | | | |
|------|-------|--|--|--|--|--|--|--|--|--|
| cons | ***** | | | | | | | | | |
|------|-------|--|--|--|--|--|--|--|--|--|

| | | | | | |
|---------------|------|------|----------------------------|-----|----|
| Alyrata | --UA | --UA | -- | --U | -- |
| Mdomestica | --U | -- | --C | -- | -- |
| Mtruncatula | U-C | -- | --U | -- | -- |
| Slycopersicum | -- | -- | UUCGAGAAAAA | -- | -- |
| BrapaFPsc | --UU | --UG | -- | --U | -- |
| Egrandis | --GA | --A | --CGGGGAAAAAAGGACAAACGAUGG | -- | -- |

| | |
|----------------|------------------------|
| Cgrandiflora | --AUAUGUUUG-----U----- |
| Ppersica | --U-----C----- |
| Csinensis | GAA-----U-----CU |
| Lusitatissimum | U-A-----C----- |
| Cclementina | GAA-----U-----CU |
| Gmax | GC----- |
| Rcommunis | --A-----C----- |
| Spurpurea | --A----- |
| Bstricta | --UA-----UG-----U----- |
| Csativus | --UU-----UC-----U----- |
| Mesculenta | --A-----A----- |
| Mguttatus | --UUUCUUUUUCUUUUA-AUUU |
| Esalsugineum | --CA-----UG-----U----- |
| Cpapaya | --C-----C----- |
| Athaliana | --UA-----UG-----U----- |
| Crubella | --AUAUGUUUG-----U----- |
| Ptrichocarpa | --A----- |
| Pvulgaris | GA-----U-----CU |
| Graimondii | GAA-----C----- |
| Stuberosum | -----UUCGA-A-AAA |

cons



| | |
|----------------|----------------------------------|
| Alyrata | -----GUA-UGAGCG-----C----- |
| Mdomestica | --UCUU--UC--UCC-CUCU-C----- |
| Mtruncatula | -----C--UC--UCU-CACUG-UA----- |
| Slycopersicum | -----AGA-----AG----- |
| BrapaFPsc | -----GUA-UAAGUGU-ACG----- |
| Egrandis | AGAAAGAGCCCCGUUGUUUUUAAAGGGG-AAA |
| Cgrandiflora | -----GUAGUAAGCGU-AAG----- |
| Ppersica | --ACUCCCUG--UG--UAU----- |
| Csinensis | --GAAAG--CC--UUU-UU-----CU |
| Lusitatissimum | -----G--UA--CUG-AAAUC-UAUC |
| Cclementina | --GAAAG--CC--UUU-UU-----CU |
| Gmax | -----CC----- |
| Rcommunis | --AAUU--UC--UCU-CUUU-UAUUU-UCCC |
| Spurpurea | --AUU-----A----- |
| Bstricta | -----GUA-UAAGCGU-ACG----- |
| Csativus | -----AUUA-AAAUUU-UUG----- |
| Mesculenta | --U-----C--UU-----C----- |
| Mguttatus | -----GAAGUAAAAGAUAGAACU |
| Esalsugineum | -----GUA-UAAGUAU-ACG----- |
| Cpapaya | --AAUU--CA--AAA-AAAA-AAA--A----- |
| Athaliana | -----GUAAUAAGUGU-ACG----- |
| Crubella | -----GUAGUAAGCGU-AAG----- |
| Ptrichocarpa | --AUU-----A----- |

Pvulgaris
Graimondii
Stuberosum

```

-----C-----UCU-UUCUCCUACU-----
--AAGU--CC-----UU-----CCU-----
-----AGU-----AG-----

```

cons

Alyrata
Mdomestica
Mtruncatula
Slycopersicum
BrapaFPsc
Egrandis
Cgrandiflora
Ppersica
Csinensis
Lusitatissimum
Cclementina
Gmax
Rcommunis
Spurpurea
Bstricta
Csativus
Mesculenta
Mguttatus
Esalsugineum
Cpapaya
Athaliana
Crubella
Ptrichocarpa
Pvulgaris
Graimondii
Stuberosum

```

-----U-----
-----U-----U-G-CU-GU-----GUAUG
-----G
-----AAGG--G--GG-----GAA
-----C-----A--AC-----
-----A-----AGAGAAAUUC-----
-----A-----A--UC-----
-----UAGAA
-----U-----U-U-CUUGUUUUUGUGCU
-----A-----A-U-CUCAACUAAG-GAG
-----U-----U-U-CUUGUUUUUGUGCU
-----U-----A-U-CUACGU-----
-----U-----G-U-CAU-----AUAUGCA
-----GAA
-----U-----A--UA-----
-----U-U-AU--UCUU-UAAAAGAAAA
-----U-----CU-----U--
AGAUUAUAAAAAGAAG-----AAA
-----U-----A--UC-----
-----A-----AA-----AAA
-----U-----A--UC-----
-----U-----A--UC-----
-----GAA
-----C-----U-U-UUUCUAU-----A--
-----U-----U-U-CUUCUAU-----G--
-----GAGG-----AAA

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cons

Alyrata
Mdomestica
Mtruncatula
Slycopersicum
BrapaFPsc
Egrandis
Cgrandiflora
Ppersica
Csinensis

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-----GUC--UUGUG--A-G
UAUG--U-GGUU-----U-A-AUG--G-A
-----C-UU-----U-G-CUG--U--
GCAA--GA-UU-----UAGU-----G
-----UACGUU-GUGUU--UUGUG--U-G
-----UCCCAU-GUUUUCGCUUGUUUUG-A
-----UCCCUU-GUGUU--UUGUG--G-G
GAUA--G--U-----A-C--GUG-----
UCUC--U-C-UU-----U-C--AUGC--C-A

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| | |
|---------------|-----------------------------------|
| Lusitatisimum | -----G-CC-----A-G--GUG-----A-G |
| Cclementina | UCUC-U-C-UU-----U-C--AUGCU--C-A |
| Gmax | -----A--C-U |
| Rcommunis | UAUU-----U-----A-C--AUUUU-AUA |
| Spurpurea | UAUC-U-C-UU-----U-C-AU-----A |
| Bstricta | -----UUCGUU-GUGUU--UUGUG--A-G |
| Csativus | AAUU--GA-UU-----UAUA--AUUU--G-G |
| Mesculenta | --UU-U-C-UU-----U-----U-----G |
| Mguttatus | AAAAGUGA-UUUUAUUU-GUCUG--UUGUG--G |
| Esalsugineum | -----UGCGUUUGUGU--UUGUG--A-G |
| Cpapaya | AAAA-AGG-UA-----C--AAGGA--A |
| Athaliana | -----UACGGU-GUGUU--UCGUA--A-G |
| Crubella | -----UUCCUU-GUGUU--UUGUG--G-G |
| Ptrichocarpa | UAUC-U-C-UU-----U-C-AU-----A |
| Pvulgaris | -----C-C-----A-U--CACUA--C-G |
| Graimondii | ---G-U-C-UU-----U-C--A----- |
| Stuberosum | GCAA--GA-UU-----AGU-----G |

cons



| | |
|---------------|--|
| Alyrata | GGGAGGUGGACAUAUUGCCAACAGAGAUUCUGUUAGG |
| Mdomestica | UGGAGGUGGGCAUACUGCCAACAGAGUUCUGUUGGA |
| Mtruncatula | AGGAGGUGGGCAUACUGCCAACAGACCACUGUUAGC |
| Slycopersicum | UGGAGGUGGGCAUACUGCCA AUAGAGCUGUGUUGGU |
| BrapaFPsc | AGGAGGUGGGCAUACUGCCA AUAGAGAUUCUGUUGGG |
| Egrandis | AGGAGGUGGGCAUACUGCCAAGUGAGCUCUGUUGGC |
| Cgrandiflora | AGGAGGUGGGCAUACUGCCA AUAGAGAUUCUGUUAGG |
| Ppersica | UGGAGGUGGGCAUACUGCCAACUGAGCUCUGUUGGC |
| Csinensis | UGGAGGUGGGCAUACUGCCAACUGAGCUCUGUUGGC |
| Lusitatisimum | GUGAGGUGGGCAUACUGCCAACAGAACUCUGUUGGU |
| Cclementina | UGGAGGUGGGCAUACUGCCAACUGAGCUCUGUUGGC |
| Gmax | CGGAGGUGGAUAUACUGCCA AUAGAGCUGUGUUGGC |
| Rcommunis | UGGAGGUGGGCAUACUGCCAACUGAGCUCUGUUGGU |
| Spurpurea | UGGAGGUGGGCAUACUGCCAACUGUGCUCUGUUGGU |
| Bstricta | AGGAGGUGGGCAUACUGCCA AUAGAGAUUCUGUUAGG |
| Csativus | GGGAGGUGGGCAUACUGCCAACUGAGUUCUGUUGGA |
| Mesculenta | UGGAGGUGGGCAUACUGUCAAGUGAGCUCUGUUGGU |
| Mguttatus | AGGAGGUGGGCAUACUGCCAACUGAGCUGUGUUGGA |
| Esalsugineum | UGGAGGUGGGCAUACUGCCAGUAGAGAUUCUGUUAGG |
| Cpapaya | AGGAGGUGGGCAUACUGUCAACAGAGCUCUGUUAGC |
| Athaliana | AGGAGGUGGGCAUACUGCCA AUAGAGAUUCUGUUAGG |
| Crubella | AGGAGGUGGGCAUACUGCCA AUAGAGAUUCUGUUAGG |
| Ptrichocarpa | UGGAGGUGGGCAUACUGCCAACCAGAGCUCUGUUGGU |
| Pvulgaris | CGGAGGUGGAACAUGCUGCCA AUAGAGCUCUGUUGGC |
| Graimondii | UGGAGGUGGGCAUACUGCCAACUGAGCUCUGUUGGC |
| Stuberosum | UGGAGGUGGGCAUACUGCCA AUAGAGCUGUGUUGGU |

cons

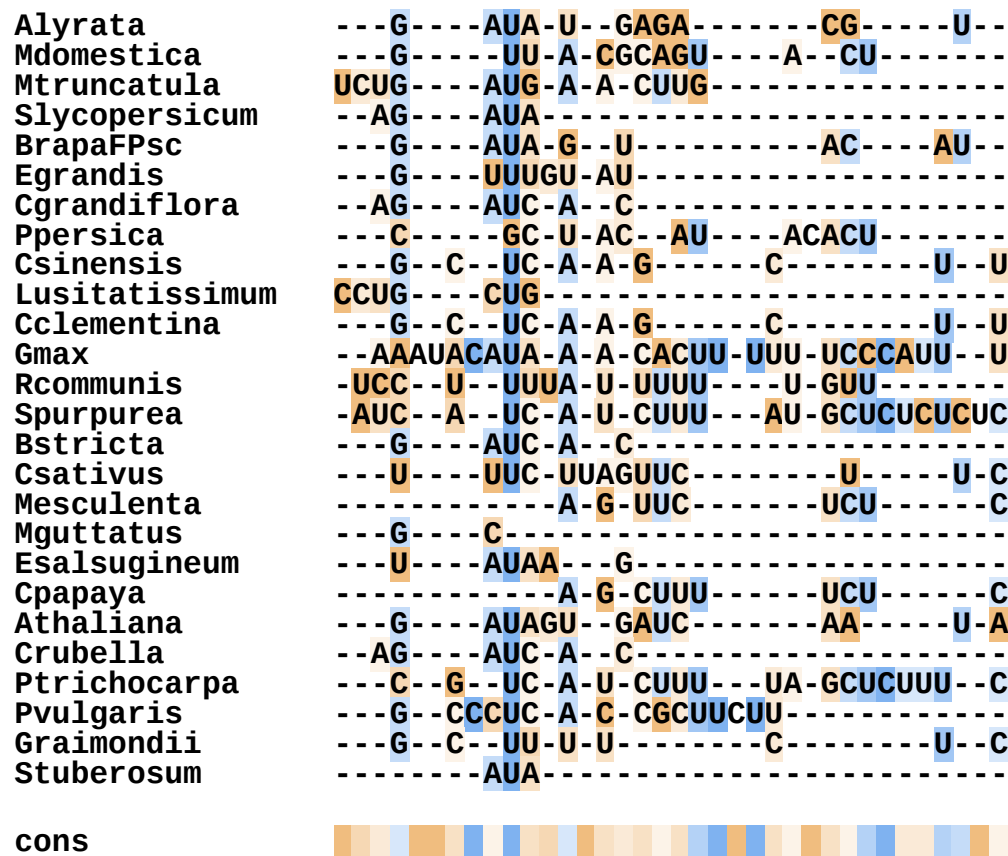
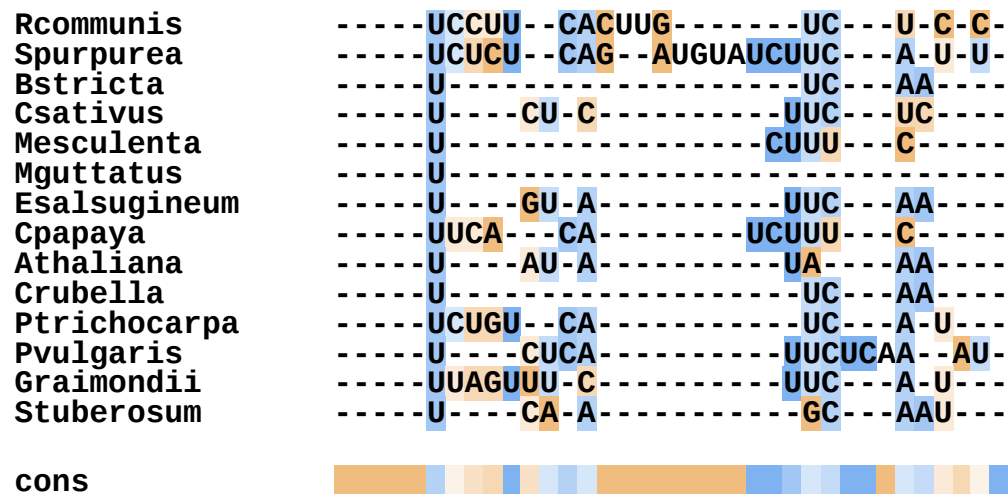


| | |
|----------------|--------------------------------------|
| Alyrata | GUUUCUUUGUA-AAA-CCCCUCAUGAUU---UG-A- |
| Mdomestica | UUCUCUUUGUA-AAA-CCC-UCGUGAGU--GU--A- |
| Mtruncatula | UUCUCUUUGUA-AAG-CCU-UCUGAUA---U--A- |
| Slycopersicum | UUCUCUUUGUA-AAA-CCC-UCGUGAUA---C--A- |
| BrapaFPsc | GUUUCUUUGUA-AAA-CCCCUCAUGAUU---UC-A- |
| Egrandis | CUCUCUUUGUGAAAA-CCC-UCGUGAUA---C--A- |
| Cgrandiflora | GUUUCUUUGUA-AAA-CCCCUCAUGAUG---U--A- |
| Ppersica | UUCUCUUUGUA-AAA-CCC-UCGUGACC---G--AC |
| Csinensis | UUCUCUUUGUA-AAA-CCC-UCGUGAUU---U--A- |
| Lusitatissimum | CUCACUUUGUA-AAA-CCU-UCUGAUA---U--A- |
| Cclementina | UUCUCUUUGUA-AAA-CCC-UCGUGAUU---U--A- |
| Gmax | UUCUCUUUGUC-AAG-CCU-CCGUGAUA---CU-A- |
| Rcommunis | CUCUCUUUGUA-AAA-CCC-UCGUGAUU---U--A- |
| Spurpurea | CUCUCUCUGUA-AAA-CCC-UCGUGAUU---A--U- |
| Bstricta | GUUUCUUUGUA-AAA-CCCCUCAUGAUG---U--A- |
| Csativus | UUCUCUUUGUU-ACAUCCC-UCAUGAUG---C--C- |
| Mesculenta | CUCUCUUUGUA-AAA-CCC-UCAUGAUGAUGU--C- |
| Mguttatus | UUCUCUUUGCA-AAA-CCC-UCGUGAAA---C--U- |
| Esalsugineum | GUUUCUUUGUA-AAA-CCUUUCAUGAUU---UUGA- |
| Cpapaya | UUUUCUUUGUA-AAA-CCC-UCAUGAUA---U--U- |
| Athaliana | GUUUCUUUGUA-AAA-CCCCUCAUGAUU---UG-A- |
| Crubella | GUUUCUUUGUA-AAA-CCCCUCAUGAUG---U--A- |
| Ptrichocarpa | CUCUCUUUGUA-AAA-CCC-UCGUGAUU---A--U- |
| Pvulgaris | UUCUCUUUGUA-AAG-CCU-UCGUGAUA---U--A- |
| Graimondii | UUCUCUUUGUA-AAA-CUC-UUGUGAUG---C--G- |
| Stuberosum | UUCUCUUUGUA-AAA-CCC-UCAUGAUG---C--A- |

cons



| | |
|----------------|--|
| Alyrata | -----U-----AU-U-----UUC-----AA----- |
| Mdomestica | -----U-----AU-A-----UGU-----A-UC----- |
| Mtruncatula | -----CUAUU-----U-----U-C-U-----UA----- |
| Slycopersicum | -----C-----G-----UC-----AAGUA----- |
| BrapaFPsc | -----U-----GU-A-----UUC-----AA----- |
| Egrandis | -----U-----AU-A-----U-C-----UC----- |
| Cgrandiflora | -----U-----U-----UC-----AA----- |
| Ppersica | GAUGAU-----AU-C-----UCC-----C-AG----- |
| Csinensis | -----U-----CC-A-----UCC-----A-G----- |
| Lusitatissimum | -----CCCU-----CA-----GUU-C-A-GCUA----- |
| Cclementina | -----U-----CC-A-----UCC-----A-G----- |
| Gmax | -----U-----AA-A-----UC-UC-A-GUU----- |



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|----------------|--------------------------------------|
| Alyrata | UGAAGA-AAACCGGGU-AUUAUC--UC-AA--AUCU |
| Mdomestica | -----CAUC--UG-CA----- |
| Mtruncatula | -----U-UCU----- |
| Slycopersicum | UU--GA-UAUGAUGGUA-AGUG--UCUGG--UUGU |
| BrapaFPsc | UGAAGA-AAAAC-GGU-AUUAUC--UC-GA--AUUC |
| Egrandis | U-UC-----CUAGGU-U-U----- |
| Cgrandiflora | UGAAGA-GAAGUUGGU-AUUAAC--UC-GA--AUCU |
| Ppersica | -----CAUG--UG-CA----- |
| Csinensis | -----UAAU--U-CU--UC- |
| Lusitatissimum | -----A-UGA----- |
| Cclementina | -----UAAU--U-CU--UC- |
| Gmax | -----UCUU--U-CC--UU- |
| Rcommunis | -----UAUC--UU--C- |
| Spurpurea | -----UAUC--UC-UA--GC- |
| Bstricta | UCAAGA-AAAGUGGGU-AUUUUC--C-GA--AUCU |
| Csativus | A-ACCC-AAA-UAU-----UUAA----- |
| Mesculenta | -----UAUA--UU-CG--GC- |
| Mguttatus | UU--AC-U-----UA-UUUG-----C-A-- |
| Esalsugineum | U-AUGCUGAUGGUGAUCAAUAUCACUU-GUUGAUGA |
| Cpapaya | -----UACC--UU-C----- |
| Athaliana | UGAAGA-AAACUAGGU-AUUAUC--UC-GA--AA-- |
| Crubella | UGAAGA-GAAGUUGGU-AUUAAC--UC-GA--AUCU |
| Ptrichocarpa | -----GAUC--UC-UA--GC- |
| Pvulgaris | -----CGU-----C--UU- |
| Graimondii | -----UAUC--UU-CA--UC- |
| Stuberosum | UU--GA-UAUGAUGGUA-AGUGU--UC-GA--UUGU |

| | |
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| cons |  |
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| | |
|----------------|------------------------------------|
| Alyrata | ACU----- |
| Mdomestica | -----ACGG-CAU--CA |
| Mtruncatula | -----GC-C-CU----- |
| Slycopersicum | UAUAA-----UAAGU-AGUAUCA |
| BrapaFPsc | ACUUA-----A-CC--UUAU-- |
| Egrandis | -----U--U-GU----- |
| Cgrandiflora | ACUCA-----AACCU-CUUAU-- |
| Ppersica | -----CCGU-CGA--CC |
| Csinensis | -----U--U----- |
| Lusitatissimum | -----ACAUACA----- |
| Cclementina | -----U--U----- |
| Gmax | -----U--U----- |
| Rcommunis | -----AACA----- |
| Spurpurea | -----AACCU-CU----- |
| Bstricta | ACUCA-----A-CCU-UUUUU-- |
| Csativus | -----CAU-CAU--CA |
| Mesculenta | ---UGUUUAUUCUUUUUCAUAAUUAA-UU----- |

| | |
|--------------|--------------------------|
| Mguttatus | --GCA-----G-----C-UCA |
| Esalsugineum | ACGCU-----A-AGAU-CUAAG-- |
| Cpapaya | -----GACCCU-CU----- |
| Athaliana | -CUUU-----AA-CCU-UUUU-- |
| Crubella | ACUCA-----AACCU-CUUAU-- |
| Ptrichocarpa | -----AACCU-CU----- |
| Pvulgaris | -----U-----U----- |
| Graimondii | -----C-A-CA-GU----- |
| Stuberosum | AAUAA-----UAAGU-GGUAUCA |

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| cons | |
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|----------------|-------------------------------------|
| Alyrata | ----- |
| Mdomestica | GUUUCUG-GUGGU-G-CUGCUA--A-UCC----- |
| Mtruncatula | ---GAU-CA--C-A-GU--U-----UC- |
| Slycopersicum | GAGUCAA-GG--U-U-AU--GG-----AU- |
| BrapaFPsc | ---U-----AU-AU--GU-----G-UC- |
| Egrandis | -----UU-UU--GU-----U-U- |
| Cgrandiflora | ---UC-----AU-AU--CU-----G-AUC- |
| Ppersica | GUUUCUG-GUAGU-A-----C-UCC- |
| Csinensis | ---CUU-UU--U-U-CU--UU----- |
| Lusitatissimum | ---UCUU-CA--A-A-GG--UA-----AAA- |
| Cclementina | ---CUU-UU--U-U-CU--UU----- |
| Gmax | ---GUUGUU--U-U-GU--UU--UUGUGU--GU- |
| Rcommunis | ----- |
| Spurpurea | -----C-U-----C- |
| Bstricta | ---UC-----AU-AU--GU-----G-AUC- |
| Csativus | UA-UCAU-UU--U-U-CU--UU-----U-AU- |
| Mesculenta | ---UAUU-UA--U-AU-----UCCU--GAUU |
| Mguttatus | GA-UCAA-GG--UAU-AU--GU-----AU- |
| Esalsugineum | -----C--UU-----G-AAG- |
| Cpapaya | -CCUCUU-UA--U-UUCU--UUUCU-UCU-----U |
| Athaliana | -----U--GU-----U-AUC- |
| Crubella | ---UC-----AU-AC--GU-----G-AUC- |
| Ptrichocarpa | ---UCUU-UU--U-U-----U--UUUUGU- |
| Pvulgaris | ---GUUCUU--U-----UU----- |
| Graimondii | ---CAU-AC--A-U-AU--UU----- |
| Stuberosum | AAGUCAA-GG--U-C-AU--GG-----AU-- |


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| cons | |
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|-------------|-----------------------------------|
| Alyrata | -----C-----UCA--U--U-----U |
| Mdomestica | -----UGAUUC-----C-CCA--GUU-CAU-U |
| Mtruncatula | ---G--UUUUCUCC--CUU-U--G-UU-UAUAU |

| | |
|----------------|--------------------------------------|
| Slycopersicum | CU-----AAAGAC-GAA-----GUUU |
| BrapaFPsc | GU-----U-----ACU-----U |
| Egrandis | UU-----UU-----U--G-G--CCGGUACUU |
| Cgrandiflora | AU-----UU-----ACUUA-U--UCU-UAUUU |
| Ppersica | -----UCGUCA-----U-A-U--GCU-UAUCU |
| Csinensis | -----A-----UACUU--U-UCUCU |
| Lusitatissimum | ---A---UCAGCU-----GC-U--U-GU-UCUUU |
| Cclementina | -----A-----UACUU--U-UCUCU |
| Gmax | AUUU-----UUAUUA-----U-C-U--GUU-UCUCU |
| Rcommunis | -----GUU-UCUGU |
| Spurpurea | -----U-C-U--CUC-UCUCU |
| Bstricta | AU-----UU-----ACUAA-U--UCU-UAUUU |
| Csativus | UU-----GU-----UCA-A-U--GCU-CUCUGA |
| Mesculenta | AUGA-----UCAGUC-G--G-U--GCU-UAUCU |
| Mguttatus | AU-----GU-----AC-----AUGU |
| Esalsugineum | AA-----UA-----A-UGG-G--U-U-UAUAU |
| Cpapaya | -----GU-----G--AC-AAUCU |
| Athaliana | -U-----GU-----G--AC-UGU-- |
| Crubella | AU-----UU-----ACUUA-U--UCU-UAUUU |
| Ptrichocarpa | ---UUUUUUUGUG-G--U-A-A--GCU-UCUUU |
| Pvulgaris | ---C---CUCGUC-----UCA-UGUUUGGU-U--CU |
| Graimondii | -----A-----UGUUU--U-ACUCU |
| Stuberosum | CU-----GAAGAU-GGA-----AUUU |

| | |
|------|--|
| cons | |
|------|--|

| | |
|----------------|-----------------------------|
| Alyrata | UUUUU-----UUU-AAU-----A--U- |
| Mdomestica | -----A-----CA-----UUU--C |
| Mtruncatula | -----UU-UUCA-----UUUC--G |
| Slycopersicum | -----A-----UU-----AU----- |
| BrapaFPsc | -----CU-UGU-----AUU-- |
| Egrandis | -----AAU-----AC-- |
| Cgrandiflora | -----A---AGU-CAA-----U--U- |
| Ppersica | -----AA-GUAA-----U-----U |
| Csinensis | -----CU-CUUA-----U-- |
| Lusitatissimum | -----CUCA-----GUU-- |
| Cclementina | -----CU-CUUA-----U-- |
| Gmax | -----UU-AAUA-----AUC--G |
| Rcommunis | -----A-C-----ACUUC-- |
| Spurpurea | -----C-U-C-UCUCUCGGC |
| Bstricta | AUGUC---AAU-CUC-----A--C- |
| Csativus | -----AAAUUUU-CUC-----AUC |
| Mesculenta | -----UUCGAU |
| Mguttatus | ---A---U-A-UAU-----AU--C- |
| Esalsugineum | -----CU-CGA-----AUCUA- |
| Cpapaya | -----AUG--U |

| | |
|--------------|---|
| Athaliana | -GAGC---GUUACU-----U- |
| Crubella | -----A---AGU-CAA-----U--U- |
| Ptrichocarpa | -----U-----G--UUUUUC-- |
| Pvulgaris | -----AUCUAA |
| Graimondii | -----UU-UGUAUUCUAUU-- |
| Stuberosum | ---A--U-U-AUU-----AU--C- |
| cons |  |