

ZmYUC	MT-----EKVLV-----ITVAGP <small>S</small> GLAV <small>A</small> ACL <small>S</small> ENG <small>I</small> PYH <small>I</small> VER <small>S</small> DC <small>S</small> AS <small>L</small> W <small>K</small> RTY <small>D</small> RL <small>K</small> L <small>H</small> L <small>A</small> K <small>S</small> F	59
AtYUC	MESH <small>P</small> HN <small>K</small> TI <small>T</small> Q <small>T</small> -Q <small>H</small> I <small>L</small> L-VG <small>P</small> TI <small>I</small> GAG <small>P</small> S <small>G</small> LAV <small>S</small> ACL <small>S</small> ENG <small>V</small> P <small>S</small> L <small>I</small> L <small>R</small> S <small>D</small> ST <small>A</small> S <small>L</small> W <small>K</small> SK <small>T</small> Y <small>D</small> RL <small>L</small> L <small>H</small> L <small>P</small> AK <small>S</small> F	73
FLOOZY	MSSC---KEEDT-QQK <small>N</small> L <small>W</small> AG <small>P</small> IT <small>I</small> GAG <small>P</small> S <small>G</small> LAV <small>S</small> ACL <small>S</small> ENG <small>V</small> P <small>S</small> L <small>I</small> L <small>R</small> S <small>D</small> CI <small>A</small> S <small>L</small> W <small>K</small> Q <small>K</small> TY <small>D</small> RL <small>L</small> L <small>H</small> L <small>P</small> K <small>S</small> F	71
LeYUCCA	MGCC---KEEPP---K <small>N</small> L <small>W</small> AG <small>P</small> ITVAGAP <small>S</small> GLAV <small>S</small> ACL <small>S</small> ENG <small>V</small> P <small>S</small> L <small>I</small> L <small>R</small> S <small>D</small> CI <small>A</small> S <small>L</small> W <small>K</small> Q <small>K</small> TY <small>D</small> RL <small>L</small> L <small>H</small> L <small>P</small> K <small>S</small> F	69
OsYUCCA7	MVLQ <small>S</small> SD <small>R</small> MD <small>S</small> L <small>F</small> SP <small>Q</small> T <small>S</small> W <small>S</small> GP <small>I</small> TVGAGP <small>S</small> GLAV <small>A</small> ACL <small>S</small> ENG <small>V</small> P <small>S</small> L <small>I</small> L <small>R</small> S <small>D</small> CI <small>A</small> S <small>L</small> W <small>K</small> Q <small>K</small> TY <small>D</small> RL <small>L</small> L <small>H</small> L <small>P</small> K <small>S</small> F	75
ZmYUC	CE <small>L</small> F <small>R</small> M <small>S</small> H <small>F</small> SD <small>A</small> PK <small>Y</small> IT <small>R</small> E <small>Q</small> F <small>V</small> R <small>Y</small> W <small>D</small> D <small>Y</small> VER <small>S</small> NI <small>L</small> PR <small>Y</small> ST <small>S</small> W <small>S</small> CE <small>Y</small> D <small>E</small> AS <small>G</small> R <small>W</small> D <small>V</small> RA <small>R</small> D <small>L</small> AD <small>G</small> G <small>G</small> R <small>W</small> AE <small>Y</small> T <small>A</small> R <small>F</small>	134
AtYUC	CR <small>L</small> EL <small>L</small> E <small>F</small> PE <small>Y</small> Y <small>P</small> K <small>Y</small> PK <small>S</small> KN <small>E</small> FL <small>A</small> Y <small>L</small> ES <small>Y</small> AS <small>H</small> E <small>S</small> I <small>A</small> PR <small>F</small> NR <small>N</small> W <small>N</small> A <small>A</small> Y <small>D</small> SS <small>G</small> F <small>W</small> AV <small>T</small> HD---N---TE <small>Y</small> L <small>S</small> K <small>N</small>	141
FLOOZY	CO <small>L</small> EL <small>L</small> E <small>F</small> FP <small>D</small> IN <small>E</small> PK <small>Y</small> PT <small>K</small> Q <small>F</small> IS <small>Y</small> LES <small>Y</small> AS <small>H</small> E <small>S</small> I <small>N</small> PK <small>Y</small> K <small>O</small> AV <small>O</small> VA <small>E</small> FD <small>H</small> V <small>G</small> F <small>W</small> AV <small>T</small> DN-----FO <small>Y</small> F <small>S</small> K <small>N</small>	138
LeYUCCA	CO <small>L</small> EL <small>L</small> E <small>F</small> FP <small>E</small> IN <small>E</small> PK <small>Y</small> PT <small>K</small> Q <small>F</small> IS <small>Y</small> LES <small>Y</small> AS <small>H</small> E <small>S</small> I <small>T</small> PK <small>F</small> Q <small>S</small> W <small>K</small> VA <small>E</small> FD <small>G</small> V <small>G</small> F <small>W</small> AV <small>T</small> Q <small>L</small> -----FO <small>Y</small> L <small>S</small> K <small>N</small>	136
OsYUCCA7	CE <small>L</small> F <small>R</small> M <small>S</small> FP <small>A</small> HY <small>S</small> Y <small>P</small> TR <small>R</small> Q <small>F</small> IS <small>Y</small> LE <small>D</small> Y <small>A</small> AS <small>S</small> I <small>N</small> EL <small>F</small> GH <small>T</small> V <small>L</small> S <small>A</small> Y <small>D</small> ET <small>S</small> EL <small>M</small> R <small>V</small> RA <small>S</small> S---SAG <small>S</small> ME <small>Y</small> IG <small>S</small> N	147
ZmYUC	L <small>V</small> AT <small>G</small> EN <small>A</small> E <small>S</small> V <small>I</small> P <small>I</small> PI <small>G</small> LR <small>D</small> FP <small>A</small> GV <small>W</small> H <small>S</small> S <small>Y</small> K <small>S</small> KN <small>Y</small> AG <small>S</small> R <small>V</small> L <small>W</small> GG <small>N</small> S <small>G</small> ME <small>L</small> AY <small>D</small> L <small>A</small> Y <small>N</small> GV <small>E</small> TS <small>L</small> V <small>I</small> R <small>S</small> SV	209
AtYUC	L <small>V</small> AT <small>G</small> EN <small>A</small> D <small>P</small> Y <small>I</small> PI <small>P</small> GR <small>K</small> SG <small>G</small> K <small>I</small> V <small>H</small> SS <small>Y</small> K <small>S</small> GE <small>F</small> PR <small>Q</small> V <small>L</small> W <small>W</small> GG <small>N</small> S <small>G</small> ME <small>L</small> SL <small>D</small> L <small>V</small> R <small>H</small> NA <small>S</small> PH <small>L</small> V <small>V</small> R <small>N</small> IV	216
FLOOZY	L <small>V</small> AT <small>G</small> EN <small>A</small> E <small>P</small> V <small>I</small> PI <small>G</small> DR <small>P</small> SG- <small>P</small> W <small>H</small> ES <small>L</small> Y <small>K</small> SG <small>E</small> FP <small>N</small> OR <small>V</small> L <small>V</small> GG <small>N</small> S <small>G</small> ME <small>V</small> SL <small>D</small> L <small>C</small> R <small>H</small> NA <small>S</small> PH <small>M</small> W <small>R</small> NS <small>V</small>	212
LeYUCCA	L <small>V</small> AT <small>G</small> EN <small>A</small> E <small>P</small> V <small>I</small> PI <small>G</small> DR <small>P</small> SG- <small>R</small> W <small>H</small> ES <small>L</small> Y <small>K</small> SG <small>E</small> FP <small>N</small> OR <small>V</small> L <small>V</small> GG <small>N</small> S <small>G</small> ME <small>V</small> SL <small>D</small> L <small>C</small> R <small>H</small> NA <small>S</small> PH <small>M</small> V <small>V</small> R <small>S</small> SV	210
OsYUCCA7	L <small>V</small> AT <small>G</small> EN <small>A</small> E <small>S</small> W <small>P</small> EL <small>P</small> G <small>I</small> DS <small>F</small> -GG <small>P</small> W <small>H</small> VA <small>D</small> Y <small>K</small> SG <small>E</small> AY <small>R</small> GR <small>S</small> R <small>V</small> L <small>W</small> GG <small>N</small> S <small>G</small> ME <small>V</small> SL <small>D</small> L <small>C</small> DE <small>A</small> RP <small>A</small> M <small>V</small> V <small>R</small> DA <small>V</small>	221
ZmYUC	H <small>V</small> M <small>T</small> K <small>G</small> L <small>I</small> ---Y-LG <small>M</small> L <small>L</small> EM <small>L</small> E <small>V</small> KL <small>V</small> DS <small>I</small> IL <small>I</small> L <small>A</small> N <small>I</small> Q <small>F</small> GL <small>S</small> R <small>Y</small> GL <small>V</small> RF <small>D</small> AG <small>P</small> L <small>L</small> K <small>A</small> KT <small>G</small> R <small>S</small> R <small>V</small> L <small>D</small> VG <small>T</small> TQ	279
AtYUC	H <small>V</small> L <small>P</small> RE <small>L</small> LG <small>V</small> ST <small>F</small> SVG <small>M</small> L <small>L</small> KC-L <small>E</small> L <small>R</small> L <small>V</small> DR <small>K</small> L <small>L</small> L <small>W</small> AN <small>L</small> SE <small>G</small> NT <small>D</small> L <small>G</small> L <small>R</small> PK <small>T</small> G <small>P</small> LE <small>L</small> KN <small>V</small> T <small>G</small> R <small>S</small> P <small>V</small> L <small>D</small> VG <small>A</small> LS	290
FLOOZY	H <small>L</small> L <small>P</small> RE <small>L</small> LG <small>I</small> ST <small>F</small> SI <small>M</small> ALL <small>K</small> C-L <small>E</small> L <small>R</small> L <small>V</small> DR <small>K</small> L <small>L</small> L <small>W</small> AN <small>L</small> IL <small>G</small> NT <small>D</small> K <small>L</small> G <small>L</small> R <small>P</small> K <small>T</small> G <small>F</small> EL <small>K</small> NA <small>T</small> G <small>K</small> TE <small>V</small> L <small>D</small> VG <small>A</small> LS	286
LeYUCCA	H <small>L</small> L <small>P</small> RE <small>L</small> LG <small>I</small> ST <small>F</small> SI <small>M</small> ALL <small>K</small> C-L <small>E</small> L <small>R</small> L <small>V</small> DR <small>K</small> L <small>L</small> L <small>W</small> AN <small>L</small> IL <small>G</small> ST <small>D</small> K <small>L</small> G <small>L</small> R <small>P</small> K <small>T</small> G <small>P</small> LE <small>L</small> KN <small>A</small> T <small>G</small> K <small>T</small> E <small>V</small> L <small>D</small> VG <small>A</small> LS	284
OsYUCCA7	H <small>V</small> L <small>P</small> RE <small>L</small> LG <small>K</small> ST <small>F</small> SI <small>A</small> V <small>L</small> L <small>A</small> W-L <small>E</small> L <small>A</small> L <small>V</small> DR <small>K</small> L <small>L</small> L <small>W</small> AN <small>L</small> IL <small>G</small> N <small>L</small> AK <small>L</small> G <small>L</small> RR <small>P</small> AT <small>G</small> P <small>L</small> E <small>L</small> KN <small>I</small> T <small>G</small> TE <small>V</small> L <small>D</small> VG <small>A</small> LA	295
ZmYUC	L <small>I</small> R <small>S</small> GI <small>T</small> W <small>P</small> GV <small>A</small> R <small>F</small> GR <small>G</small> EN <small>L</small> AD <small>G</small> R <small>V</small> I <small>A</small> L <small>D</small> AV <small>L</small> AT <small>G</small> Y <small>S</small> N <small>V</small> P <small>Q</small> W <small>L</small> C-G <small>N</small> DF <small>P</small> K <small>D</small> G <small>P</small> K-T <small>P</small> FP <small>N</small> G---W <small>R</small>	354
AtYUC	L <small>I</small> R <small>S</small> GI <small>T</small> Q <small>I</small> W <small>P</small> GV <small>A</small> R <small>F</small> GR <small>G</small> EN <small>L</small> AD <small>G</small> R <small>V</small> I <small>A</small> L <small>D</small> AV <small>L</small> AT <small>G</small> Y <small>S</small> N <small>V</small> P <small>Q</small> W <small>L</small> C-G <small>D</small> DF <small>P</small> T <small>D</small> D <small>G</small> M <small>P</small> K-T <small>P</small> FP <small>N</small> G---W <small>R</small>	359
FLOOZY	Q <small>I</small> R <small>S</small> GI <small>T</small> Q <small>I</small> W <small>H</small> W <small>K</small> E <small>I</small> T <small>K</small> I <small>G</small> AK <small>F</small> VDGK <small>E</small> SE <small>F</small> DS <small>I</small> IL <small>A</small> T <small>G</small> Y <small>K</small> S <small>N</small> V <small>P</small> SW <small>L</small> A-G <small>T</small> E <small>F</small> FT <small>S</small> Q <small>G</small> M <small>P</small> K-T <small>P</small> FP <small>N</small> G---W <small>R</small>	355
LeYUCCA	Q <small>I</small> R <small>S</small> GI <small>T</small> Q <small>I</small> W <small>P</small> GV <small>A</small> R <small>F</small> GR <small>G</small> EN <small>L</small> AD <small>G</small> R <small>V</small> I <small>A</small> L <small>D</small> AV <small>L</small> AT <small>G</small> Y <small>S</small> N <small>V</small> P <small>Q</small> W <small>L</small> C-G <small>S</small> DF <small>P</small> T <small>S</small> Q <small>G</small> M <small>P</small> K-T <small>P</small> FP <small>N</small> G---W <small>R</small>	353
OsYUCCA7	R <small>I</small> R <small>S</small> GI <small>T</small> W <small>P</small> GV <small>A</small> R <small>F</small> GR <small>G</small> EN <small>L</small> AD <small>G</small> R <small>V</small> I <small>A</small> L <small>D</small> AV <small>L</small> AT <small>G</small> Y <small>S</small> N <small>V</small> P <small>Q</small> W <small>L</small> C-G <small>N</small> DF <small>P</small> K <small>D</small> G <small>P</small> K-T <small>P</small> FP <small>N</small> G---W <small>R</small>	364
ZmYUC	GG <small>N</small> LY <small>G</small> V <small>G</small> L <small>G</small> MA <small>G</small> L <small>A</small> GIS <small>S</small> DA <small>V</small> SV <small>A</small> ND <small>I</small> KAA-----VDS <small>M</small> W <small>G</small> PP <small>A</small> P <small>W</small> F	398
AtYUC	GG <small>R</small> GL <small>Y</small> TV <small>G</small> F <small>T</small> RR <small>G</small> LL <small>G</small> T <small>A</small> SD <small>A</small> V <small>K</small> T <small>A</small> SE <small>I</small> GD <small>Q</small> W <small>E</small> DE <small>I</small> NG <small>S</small> TR <small>A</small> M-CSS <small>R</small> V <small>F</small> T <small>S</small> K <small>S</small>	414
FLOOZY	GG <small>N</small> LY <small>T</small> V <small>G</small> F <small>T</small> RR <small>G</small> LL <small>G</small> T <small>A</small> SD <small>A</small> NI <small>A</small> R <small>D</small> I <small>S</small> EW <small>R</small> K-Y <small>R</small> G <small>F</small> Q <small>R</small> N <small>F</small> -CI <small>S</small> N <small>L</small> SD <small>S</small> Q <small>G</small> I <small>Q</small> F	412
LeYUCCA	GG <small>N</small> LY <small>T</small> V <small>G</small> F <small>T</small> RR <small>G</small> LL <small>G</small> T <small>A</small> SD <small>A</small> NI <small>A</small> R <small>D</small> I <small>S</small> EQ <small>W</small> RS-F <small>R</small> G <small>F</small> Q <small>R</small> N <small>F</small> -CI <small>T</small> R <small>N</small> L <small>S</small> D <small>N</small> Q <small>G</small> I <small>Q</small> F	410
OsYUCCA7	GG <small>S</small> GL <small>Y</small> W <small>V</small> G <small>F</small> T <small>R</small> R <small>G</small> L <small>S</small> AS <small>A</small> D <small>A</small> M <small>R</small> AK <small>D</small> L <small>A</small> W <small>W</small> KE <small>A</small> TR <small>P</small> TR <small>S</small> T <small>A</small> CH <small>R</small> GI---S <small>V</small> IF	419

Supplemental Figure 2. Protein alignment of ZmYUC from maize with homologs from *Arabidopsis thaliana* (AtYUC), petunia (FLOOZY), tomato (LeYUCCA) and rice (OsYucca7).