G1: S:A1087S, S:A27S, S:A575S, S:F456L, S:F59S, S:K478T, S:L212I, S:L455S, S:R346T, S:T22N
G2: S:A1087S, S:A27S, S:F456L, S:F59S, S:H445P, S:L212I, S:L455S, S:R190S, S:R346T, S:T22N

-O- G63: S:F456V, S:H445R, S:K182N, S:K478T, S:L455S, S:R346T, S:S31F, S:T22N

- G3: S:A1174V, S:A27S, S:F186L, S:F456L, S:H445R, S:K1086R, S:L212I, S:L455S, S:N487D, S:Q493E, S:R190S, S:R346T, S:V1104L

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- G4: S:A27S, S:A376N, S:F456L, S:I101T, S:K679R, S:L212I, S:L455S, S:Q493E, S:S673T, S:V1104L
G5: S:A27S, S:A376N, S:F456L, S:I101T, S:K679R, S:L212I, S:L455S, S:Q493E, S:V1104L
-O- G6: S:A27S, S:A435S, S:F456L, S:F59S, S:G184S, S:K478I, S:L212I, S:L455S, S:Q493E, S:T22N
-O- G7: S:A27S, S:A435S, S:F456L, S:F59S, S:L212I, S:L455S, S:Q493E, S:T22N, S:V1104L
-O- G8: S:A27S, S:A435S, S:F456L, S:H445P, S:L212I, S:L455S, S:Q493E, S:V1104L
-(-) G9: S:A27S, S:A435S, S:F456L, S:K1073N, S:L212I, S:L455S, S:Q493E, S:V1104L
—— G10: S:A27S, S:A435S, S:F456L, S:K478E, S:L212I, S:L455S, S:S60P
G11: S:A27S, S:A435S, S:F456L, S:K478T, S:L212I, S:L455S, S:Q183H, S:R346T, S:V1264L
-O- G12: S:A27S, S:A435S, S:F456L, S:L212I, S:L455S, S:P139S, S:Q493E, S:V1104L
-O- G13: S:A27S, S:A435S, S:F456L, S:L212I, S:L455S, S:Q183H, S:Q493E, S:R190T, S:T572I, S:V1104L
— G14: S:A27S, S:A435S, S:F456L, S:L212I, S:L455S, S:Q183H, S:Q493E, S:R190T, S:V1104L
-O- G15: S:A27S, S:A435S, S:F456L, S:L212I, S:L455S, S:Q493E, S:R346T, S:V1104L
—— G16: S:A27S, S:A435S, S:F456L, S:L212I, S:L455S, S:Q493E, S:S446N, S:V1104L
-O- G17: S:A27S, S:A435S, S:F456L, S:L212I, S:L455S, S:Q493E, S:S680P, S:T547K, S:V1104L
-(-)- G18: S:A27S, S:A435S, S:F456L, S:L212I, S:L455S, S:Q493E, S:V1104L
-O- G19: S:A27S, S:A475V, S:F456L, S:H445P, S:K182R, S:K444R, S:L212I, S:L441R, S:L455S, S:R190S, S:R346T, S:S31P, S:T22N
-O- G20: S:A27S, S:A475V, S:F456L, S:H445P, S:K182R, S:L212I, S:L441R, S:L455S, S:R190S, S:R346T, S:S31P, S:T22N, S:T791A
-O- G21: S:A27S, S:A475V, S:F456L, S:K182R, S:K444R, S:L212I, S:L455S, S:R190S, S:R346T, S:S31P, S:S680F, S:T22N
-O- G22: S:A27S, S:A475V, S:F456L, S:K182R, S:K444R, S:L212I, S:L455S, S:R190S, S:R346T, S:S31P, S:T22N
-O- G23: S:A27S, S:A522P, S:F186L, S:F456L, S:H445R, S:K1086R, S:L212I, S:L455S, S:Q493E, S:R190S, S:R346T, S:V1104L
G24: S:A27S, S:A522P, S:F456L, S:H146Q, S:L212I, S:L455S, S:Q493E, S:R346T, S:V1104L
G25: S:A27S, S:A688V, S:F456L, S:K182N, S:L176F, S:L212I, S:L455S, S:R346T, S:S60P, S:T22N
-O- G26: S:A27S, S:D264A, S:D450N, S:F127V, S:F216L, S:F939S, S:G158R, S:H339D, S:H445V, S:K460N, S:K481N, S:K484A, S:K554E, S:L1143P, S:L50S, S:N245H, S:P486V, S:R681H, S:S157F, S:S446G, S:S621P, S:T21R, S:T356K, S:V332I, S:V570A, S:W452R
-O- G27: S:A27S, S:F186I, S:F456L, S:K478T, S:L212I, S:L455S, S:R346T, S:S31F, S:T22N, S:V1104L
-O- G28: S:A27S, S:F186L, S:F456L, S:H445R, S:K1086R, S:K478E, S:K679R, S:L212I, S:L455S, S:Q493E, S:R190S, S:R346T, S:V1104L
-O- G29: S:A27S, S:F186L, S:F456L, S:H445R, S:K1086R, S:K478E, S:L212I, S:L455S, S:Q493E, S:R190S, S:R346T, S:T22N, S:V1104L
-O- G30: S:A27S, S:F186L, S:F456L, S:H445R, S:K1086R, S:K478T, S:K679R, S:L212I, S:L455S, S:Q493E, S:R190S, S:R346T, S:V1104L
-O- G31: S:A27S, S:F186L, S:F456L, S:H445R, S:K1086R, S:K679R, S:L212I, S:L455S, S:Q493E, S:R190S, S:R346T, S:R765L, S:V1104L
-O- G32: S:A27S, S:F186L, S:F456L, S:H445R, S:K1086R, S:K679R, S:L212I, S:L455S, S:Q493E, S:R190S, S:R346T, S:V1104L
-O- G33: S:A27S, S:F186L, S:F456L, S:H445R, S:K1086R, S:L212I, S:L455S, S:Q493E, S:R190S, S:R346T, S:T22N, S:V1104L
-()- G34: S:A27S, S:F186L, S:F456L, S:H445R, S:K1086R, S:L212I, S:L455S, S:Q493E, S:R190S, S:R346T, S:V1104L
-O- G35: S:A27S, S:F32I, S:F456L, S:K1086R, S:K182N, S:K478T, S:L212I, S:L455S, S:R346T, S:T22N, S:T572I, S:V1104L
-(-) G36: S:A27S, S:F32S, S:F456L, S:H1088R, S:K478T, S:L212I, S:L455S, S:M153I, S:R346T, S:S31F, S:T22N
-(-) G37: S:A27S, S:F456L, S:F59S, S:G184S, S:K478I, S:L212I, S:L455S, S:Q493E, S:T22N
-(-) G38: S:A27S, S:F456L, S:F59S, S:G72R, S:K1086R, S:L212I, S:L455S, S:R346T, S:T22N, S:T572I, S:V1104L
-(-) G39: S:A27S, S:F456L, S:F59S, S:G72R, S:L212I, S:L455S, S:Q493E, S:R214L, S:T22N, S:V1104L
-O- G40: S:A27S, S:F456L, S:F59S, S:L212I, S:L455S, S:L5F, S:Q493E, S:T22N, S:V1104L, S:V1264L
-O- G41: S:A27S, S:F456L, S:F59S, S:L212I, S:L455S, S:Q493E, S:R346T, S:T22N, S:V1104L
-O- G42: S:A27S, S:F456L, S:F59S, S:L212I, S:L455S, S:Q493E, S:T22N, S:T284I, S:V1104L
—— G43: S:A27S, S:F456L, S:F59S, S:L212I, S:L455S, S:Q493E, S:T22N, S:T572I, S:V1104L
—— G44: S:A27S, S:F456L, S:F59S, S:L212I, S:L455S, S:Q493E, S:T22N, S:V1104L
—— G45: S:A27S, S:F456L, S:F59S, S:L212I, S:L455S, S:T22N
-- G46: S:A27S, S:F456L, S:H146Q, S:L212I, S:L455S, S:Q173R, S:R346T, S:T22N, S:V1104L
-(-(48: S:A27S, S:F456L, S:H445P, S:L212I, S:L455S, S:Q183H, S:R346T
-(-) G49: S:A27S, S:F456L, S:H445R, S:K1086R, S:K182R, S:K679R, S:L212I, S:L455S, S:Q493E, S:R190S, S:R346T, S:S31P, S:T22N, S:V1104L
G50: S:A27S, S:F456L, S:H445R, S:K182R, S:K444R, S:L212I, S:L455S, S:N487D, S:Q493E, S:R190S, S:R346T, S:S31P, S:T22N, S:T572I
G51: S:A27S, S:F456L, S:K182R, S:K444R, S:L212I, S:L455S, S:R190S, S:R346T, S:S31P, S:T22N, S:T572I
→ G52: S:A27S, S:F456L, S:K182R, S:L212I, S:L335S, S:L455S, S:Q493E, S:R190S, S:R346T, S:S31P, S:T22N
G53: S:A27S, S:F456L, S:K403R, S:L212I, S:L455S, S:Q493E, S:S680P, S:V1104L
-○ G54: S:A27S, S:F456L, S:K554E, S:L212I, S:L335S, S:L455S, S:Q183H, S:Q493E, S:R346T, S:S408R, S:V1104L, S:V267L
-O- G55: S:A27S, S:F456L, S:L212I, S:L455S, S:Q493E, S:S31P, S:T22N
-(-) G56: S:A27S, S:F456L, S:L212I, S:L455S, S:Q493E, S:S31P, S:T22N, S:T572I
-O- G57: S:A27S, S:F456L, S:L212I, S:L455S, S:Q493E, S:T572I, S:V1104L
—— G58: S:A27S, S:F456L, S:L212I, S:L455S, S:Q493E, S:V1104L
-O- G59: S:A27S, S:F456V, S:K182N, S:K478T, S:L212I, S:L455S, S:R346T, S:S31F, S:S680P, S:T22N
-O- G60: S:A376T, S:D142G, S:D142G, S:D142G, S:D142G, S:D1450N, S:F127V, S:F127V, S:F127V, S:F371S, S:F371S, S:F371S, S:F371S, S:F375S, S:
-O- G61: S:F456L, S:K1086R, S:K478T, S:L212I, S:L455S, S:R346T, S:V1104L
-O- G62: S:F456L, S:K182R, S:K444R, S:L212I, S:L455S, S:R190S, S:R346T, S:S31P
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