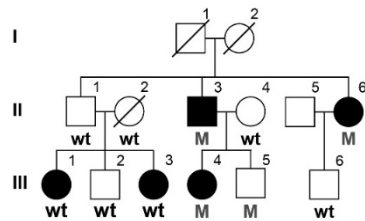


Fig. S1 - Segregation analysis and conservation for a) MASP1 p.Pro462Thr and b) RNF213 p.Arg4019Cys.

Males are represented by squares and females by circles, a diagonal line indicates subjects known to be deceased. Black filled symbol, MS; gray filled, unaffected obligate carrier. Heterozygote carriers (M) and wild-type (wt) genotypes are provided. MS patients with inferred genotypes are indicated with an asterisk. Organism and RefSeq accession numbers are provided for orthologs and gene name and RefSeq accession numbers for human paralogs, which were obtained from Ensembl release 91. Evolutionarily conserved positions for nominated pathogenic substitutions are highlighted in black.

a)



Human NP_624302.1
 Mouse NP_032581.2
 Rat NP_071593.1
 Cow NP_001070436.1
 Chicken NP_998751.1
 Zebrafish XP_001341936.1
 Frog NP_001090874.1

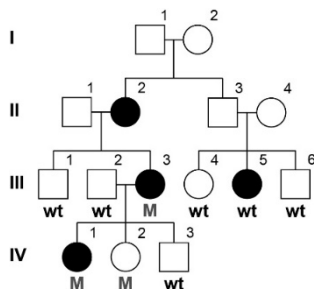
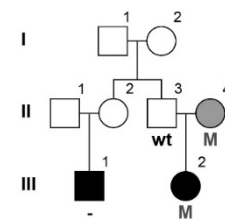
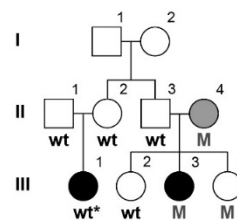
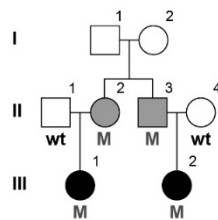
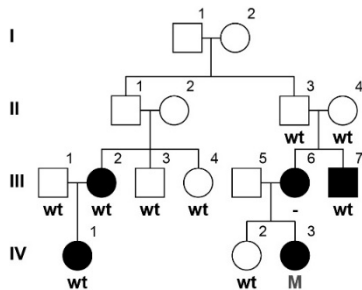
P462T

AEPGLF**P**WQALIV
 AQKGT**M**PWIAMLS
 AQKGT**T**PWIAMLS
 AEPGLF**P**WQALIV
 AEPGFF**P**WQALIV
 ASPGLF**P**WQVLLS
 AEPGFF**P**WQVLIV

MASP1 NP_624302.1
 MASP2 NP_006601.2
 C1R NP_001724.4
 C1S NP_001725.1
 C1RL NP_057630.2
 F7 NP_062562.1
 F9 NP_001300842.1
 F10 NP_000495.1
 HP NP_005134.1
 HPR NP_066275.3
 PROC NP_000303.1
 PROZ NP_001243063.1

AEPGLF**P**WQALIV
 AKPGDF**P**WQVLIL
 AKMG**N**F**P**WQVFTN
 ADIK**N**F**P**WQVFFD
 AKLG**N**F**P**WQAFTS
 CPKG**E**C**P**WQVLLL
 AKPG**Q**F**P**WQVVL-
 CKDG**E**C**P**WQALLI
 DAKGS**F****P**WQAKMV
 DAKGS**F****P**WQAKMV
 TRRG**D**S**P**WQVLL
 -DLQ**D**L**P**WQVKLT

b)



Human NP_001243000.2
 Mouse XP_006534693.1
 Rat XP_017453312.1
 Cow XP_015323737.1
 Chicken XP_004946335.2
 Zebrafish NP_001340764.1
 Frog XP_017945222.1

R4019C

DHVH**C**L**R**CLRAWF
 DHVY**C**L**R**CIQTWL
 DHVY**C**L**P**CIQTWL
 DHV**F****C**L**R**CI**E**VNL
 NHA**F****C**E**K**CIRAWL
 DH**I**Y**C**L**T**CIRQWL
