aaggccaaat cagagcatca ggaaggtgaa gagagatctg ggaggggcta 104923928
gggagaggat ggatctcttc cccattcact tcctggccca cccagactgg 104923978
ccccaggggt gcagctgaca ggccccaccc ttgggaactg caccctcctg 104924028
actggtgtcc tgcaggcacc ctgaggccat caccctggac ccctgcccta 104924078
cataggcctt acaaggagga gccagggtgg acacccagac ctcattgaaa 104924128
gtaggagtgt tctcaaggtc ccagacctta ctcagggacc ccagtcgggg 104924178
ggtggggcag tgggaggcag agccccttgc taggagcttc tagccaggcc 104924228
caccttttca gatatgccag tgagcagccc cagcttcgtt ctccaagata 104924278
aagaccctag ttacctccat tgctcagcct cccttgcagc taagtgtagc 104924328
catgtgacta agttctagat caagttccag atcacagata agtggaagtg 104924378
ccctgtggga cttccaggaa gtctcctctg ggatgtccct tattctctgc 104924428
taagaacaca gaggcaatgg ctgagttcca gcagccactg tgaggccatg 104924478
aaggcaggga tcctagggac tgggatctga gagcctggct cccaatggca 104924528
gtggagcaat gccatcatct ctagcaaggc cgtctctagc ctgccagccc 104924578
ctggacctgc ttagtgttcg agagtaatga acaaccttgc tgaagccact 104924628
gttccttagg tgtctgtggc ctgcagctga acttgactcc gattcgtagg 104924678
cccgcaactg gagggcctct acctcgaggg agtggggtgt agatttttcc 104924728
tggaggtgaa ggttctcagc cctaccctct agcccgccca cccagctcca 104924778
gccgtctgtt tctgtctcag atgagagggg gcctctcagg acaaagagga 104924828
agtagctgga aggggaagga gccagctgca gagaggagga ggtgagctgc 104924878
AGAGAAGAGG AGGTTGGTGT GGAGCACAGG CAGCACCGAG CCTGCCCCGT 104924928
GAGCTGAGGG CCTGCAGTCT GCGGCTGGAA TCAGGATAGA CACCAAGGCA 104924978
GGACCCCCAG AGgtatgtgc caatgaggcc agggcagctg agaaaagcca 104925028
ggcatgggga aagggctgct gtctgcctcc ctatggcctc agcctcccag 104925078
caaccccagg tccagagagt cacacagcct ccagctagtc ctgtagatga 104925128
ctcgctccgt ccccagtccg tgcagctggg ataagctggg ccctggctct 104925178
ccagccaggt gacagctggg ccctctacct cagcctggga ctggcagcca 104925228
tgcctaatgc cctgcagggc aggaaatctg gcaccttcag ccatgacctc 104925278
tgatgtctgc agggtcttac gctatctacc atgggaccag ggggctacag 104925328
ccctactctg caggggtctc tcagcttgag ccaacctggc tggcggtcct 104925378
cccaggttcc attgcaggag gaggtggtga ggcgctctgg ggtctgtagt 104925428
cctgggaggg gacttggaca ggctccaagt ctgagatggg gcctgcaaga 104925478
ggcagcgcct ctgtgctctg agctgcccgt ctgcctggag catttaaggg 104925528
agcaaaggtc ctctctggtg agggcaggga gtgtggggag cagctgtcca 104925578
agaacagccc tggcacctcg ttgcccagcc acagcccagg attccatgtt 104925628
tcctctcatt gaccagccac agcccaggat tccatgtttc ctcttctgag 104925678
agttagtggg ggagagcaaa ggcccgatgc tgggccctga atccctgggg 104925728
acagtgggga cacggtgggc accctgaggt ctcctctgtg gggtgggggg 104925778
agcatccccc agagttcagc tctggggtgg gggcggcacc cacccacctc 104925828
tgcaggaccc cccagcgtgg ggggagttgg gccgcagtga cttggcctga 104925878

gtcccctgtc cccacacttg gtttatgctc ctacccccaa tcccccataa 104925928

cgcttggtct ccagggcaga ctcagtccag gcccgactcc tgtggtgttc 104925978

ctggcatttc cgccccatgc tgaggcaggc caggttctca aagccctcag 104926028

ccctgacccg tgggaggaca gcccagacga accccagagg cctggaggct 104926078

gagctggctg ctcctgggtg gacagccgac ccaccgagcc ctgggtccca 104926128

gcgcccagcc tggctgcaga cactggcact cagcactgcc caggcccagg 104926178

ccccaaacct cggagacatc cccatcccag ccaggggcca gccagctcct 104926228

gccctggtgg atgtctcagt cagaggctgg ccagccaggt gaccatgctg 104926278

ggcacagacc cctccctgca cccggggagg gcgcctctgt acttgtgagg 104926328

cacccttccc ccatggtggc acctggggca gcctgactgc ttgctttggg 104926378

ggtaggagtg gggatgggag cccacatccc acagggccca gatggcctgg 104926428

ctcccagctc cttgtggggt gaccactctg aggagataag gcgagtccct 104926478

gcagcagagg acaacccccc ctgccagcag taggggtccc actctgccgc 104926528

catctctgcc ctctccacgc ctagcctctc cagcaagggt actgctcagc 104926578

tgcccccctct gacctgtggc tctctggagg ggctgccgtg gggccaagac 104926628

aggagcccag cccaggaggg aagcagttat ttataggcca gcaataagag 104926678

gaccaagcga caaaagcaga aacagccctt tcagacgcag tttcagttgt 104926728

ggttgaaaca gggaactgag atgcaaatac ctagatactc actgagtggg 104926778

agaccctgaa aggggagaca cagaaagccg gggcatgtgg ctaggcacag 104926828

acgcccgccc gcccctcgtg cttggcccag gctcagccct ggggaccgcc 104926878

ttaacagcag tccttccggc ttggccaggg ggacaggaca ggtgacatgt 104926928

ggccggctgc gggctccaac acccacacgg cttgtcctcg tggaaagcac 104926978

acccccaaca tccagggcgt gacctcgggc atgagtgggg ggcttttggg 104927028

ggcttatgtg ggtgtctgtg caggggtgtc cccagtgccc agctgcccag 104927078

gcactgaggg gcagttctgg gcagagctgg agctgctggt gatgccaggc 104927128

tgccctgtgc agATGCTGAA GCCTCTTTGG AAAGCAGCAG TGGCCCCCAC 104927178

ATGGCCATGC TCCATGCCGC CCCGCCGCCC GTGGGACAGA GAGGCTGGCA 104927228

CGgtaggact ggggggcccc agggggggagg tggctgggat caatggcctt 104927278

tcaagagctc cgagccagag tggagaggtc acaagcagcc ttgaggggggc 104927328

ctccaagcag aggtgccctg actggtgggc aagggaagcc tccctgggct 104927378

gctccagacc ttccctttat gcccctgctg gaggtgctgg ggacagccag 104927428

ttaccacgag ccacagcatt gcagagtggg ctgcaggccc cctgacccct 104927478

gccaccaccc tgggctgggg gccttctctg tatcaccctc ccctctccct 104927528

tgtccaccct agtcccaccc cagtggcagc ccaggtccgg gaagtcaaga 104927578

cggtctctgt ctcagcactg gaggggccat cgtggcccag ccagaagtca 104927628

agccccgccc tgtctggtga ccctgcgggt gctgccccat ccagTTGCAG 104927678

GTCCTGGGAG CGCTGGCTGT GCTGTGGCTG GGCTCCGTGG CTCTTATCTG 104927728

CCTCCTGTGG CAAGTGCCCC GTCCTCCCAC CTGGGGCCAG GTGCAGCCCA 104927778

AGGACGTGCC CAGGTCCTGG GAGCATGGCT CCAGCCCAGC TTGGGAGCCC 104927828

CTGGAAGCAG AGGCCAGGCA GCAGAGGGAC TCCTGCCAgt aagtgagccc 104927878

atggaggcct gcgggggcag gtctcagttt ggggctgctg cctgtgtttc 104927928

tgcccttgga tctgcccgtg agataagggg ggccctctac cagctcctcc 104927978

aggaaggtgc aggtcaccag ggagggccac gaccatatga gctggagtgg 104928028

gggctgggga cggggcaggc gtgtggtgct ttttgcagca aacagaggct 104928078

gccacctggg ggctctgaca ggctggagaa cactgcctgt gctgaggctc 104928128

acccccctcag tccttccacc cctgggggta atgtcactgt cccctgccgc 104928178

ccctcatcct tccctcccac ccttctttcc ctgcggttgg ggtcctggaa 104928228

tcccaggact gccccggagg aacctgttgg gccatcctgc acacatcccc 104928278

tggaaacggg agcttacctg cccctggccc aacctttccc ttccaggcca 104928328

gctctggcca ccaccaaggg cttccacacc acgaggccac cccagacccc 104928378

agactccaca gctctgctct actctgcccg gcttcaggag cagctgctcc 104928428

ctgtgggcag tgcctcaggg ctgagtgggg ccaggacccc ccagtctagc 104928478

ctgctctgga ccaggcagcc cctctcaggc tccttcccaa attgctcctg 104928528

ggtgtcacca ccccagcagc atgctgggct caggcccacc ctgcccagtc 104928578

tgttttgttg cctatacctt aaacccttac cctgcacact tggcctgggc 104928628

tcatcccggg ggccacctga gcaacggttg ctctggcttg gcagtgggat 104928678

ggggcaggtg atgtgaggtg ggctgggggc tcccgcaccc atactgagcc 104928728

cagtgtggct ctccccacag GCTTGTCCTT GTGGAAAGCA TCCCCCAGGA 104928778

CCTGCCATCT GCAGCCGGCA GCCCCTCTGC CCAGCCTCTG GGCCAGGCCT 104928828

GGCTGCAGCT GCTGGACACT GCCCAGGAGA GCGTCCACGT GGCTTCATAC 104928878

TACTGGTCCC TCACAGGGCC TGACATCGGG GTCAACGACT CGTCTTCCCA 104928928

GCTGgtgcgc cccgccctgg ccccaccgca tcctggtgct ggaaacacag 104928978

caagtcaggc tgcctatcta tgcaggcgtc tcgggcacca ggcccggggg 104929028

ctcagcttgg tggtagggtc tagcatggaa cagggattag gccgctcctt 104929078

tgggggctct aacagcagag gtgtcaagga gctgggcctc tgggtgacta 104929128

aacactcaga ctgtgcctgg tgcagtttgg ctctcaccaa gggtcatcca 104929178

gatacttgac ctgaccttga gctgtgggca gtcataggtg ggcctcctga 104929228

ggaggacatg ggtcctagtg gggatgcgga ggagagggca gcctgaggtc 104929278

agctctcatg gctggcctgg ccttgcagGG AGAGGCTCTT CTGCAGAAGC 104929328

TGCAGCAGCT GCTGGGCAGG AACATTTCCC TGGCTGTGGC CACCAGCAGC 104929378

CCGACACTGG CCAGGACATC CACCGACCTG CAGGTTCTGG CTGCCCGAGg 104929428 P181L D189E

tgggtacctg caccatgctg ggcaccactg ccctagcgtc gggcatgggc 104929478

tgtctggctg gcaccacagg acaaggaaaa gaagtgaggg tgggaaaggt 104929528

gccctggact tccctaggac accccaggag ggcaggaccc agggctctga 104929578

ggtcctttga gtcagcttca cctgggcaca gggctggttc cacggatcca 104929628

aaagtgccat tttccacagg gcagagcaca ggtggcctcg gagccctgct 104929678

gagcccagca gctgacctgt gggtggaggc tcaggctggg acctctggct 104929728

gggcagtgag aggccatggg cagtcaccac aaaggcaggc tctggagctg 104929778

agctgcccag agggatcctg ggccagtcta tccctctgtg tcctcaccta 104929828

taaaatgggg atgaggatag cagcagctta gtaggactgt tgtgaggaca 104929878

tctgagtcaa ccccactgtc aagagcttgg ggtcaggctc accatgaagc 104929928

tagcacttag caagacctag ttcatcccat tgcctgaact ctccaccagG 104929978

TGCCCATGTA CGACAGGTGC CCATGGGGCG GCTCACCAGG GGTGTTTTGC 104930028 R201Q

ACTCCAAATT CTGGGTTGTG GATGGACGGC ACATATACAT GGGCAGTGCC 104930078

AACATGGACT GGCGGTCTCT GACGCAGgtg agtgccaggg ccctaacaca 104930128

ggaggcctgc ctgaagcgtt tccccgcctg cactcctggg gacttggcct 104930178

gacatctcag tgcatctgga gaaagtcgtg tagtcctgtt tacaattcac 104930228

tatggtagaa acaaccggag actggtctaa taaatgatag aattctacac 104930278

agccactgaa ttcatgctgt ggaatcacat tcaatgacat ggaaagatgt 104930328

tcaagtcaca ttacccaggg aagcatggag attacaaaat acaagccttt 104930378

ttaggaaaag caatgcatga aaaacgtgtc agaatggtca tggcaaaggc 104930428

aaccatggtt atcacttgac agtgggatta agaatgatcc cattcttaat 104930478

ggcttgatgc attttctatt gtttttgtaa taaacgtgta ttgctttgat 104930528

cattggaata caatgttcaa aaacacaggc acccgctggg cactcctccc 104930578

accagcacac tctattacag attcctacag gcaatgcttc ccgcaagtgg 104930628

ggaccagtcg ggcagggact gcacctgccc caacatccct ggcctgggtg 104930678

gagtggggtg gaggccccac agaggggttt ttctcccaca gcgcctgact 104930728

ttggtccctg cagGTGAAGG AGCTTGGCGC TGTCATCTAT AACTGCAGCC 104930778 Y248C

ACCTGGCCCA AGACCTGGAG AAGACCTTCC AGACCTACTG GGTACTGGGG 104930828

GTGCCCAAGG CTGTCCTCCC CAAAACCTGG CCTCAGAACT TCTCATCTCA 104930878

CTTCAACCGT TTCCAGCCCT TCCACGGCCT CTTTGATGGG GTGCCCACCA 104930928

CTGCCTACTT CTCAgtaaga cgggttgaga aggagcccat cagaggcccc 104930978

tgttctcccc tggctggcca gacccacagg gagccctctg ggctggccct 104931028

gcagacacca gcagcatcag ctgggtcctc aggcagccag caccatgggt 104931078

ggggctgtgg ccctggggtg agcagcaagc aggctggcat cagtaggctc 104931128

tgggctgtgc ctggaggcag gcttagctcc aggaggacag ctggtcagca 104931178

ccatccctgg gaaacaggcc gcctgggagg tggtgggagg acctggggcc 104931228

ctgggagtct ccagactgct gggcgaggcc aaggggctta gctgggcact 104931278

ggagagggag gggaacccca cttgctctgc ggggaaggaa gggaagagtg 104931328

aggggtgggc agatcctcct ttatcagccc acgggggtgg gggtggacag 104931378

ccctccagcc agccgaggga ctggtctgta gtagaggctg tatcagaaca 104931428

agggaagcct ccctagatgg gggtgggggt ggcaccctga agggagtgga 104931478

taaacttccc tgtggccagg aactgtttct gggacgtcaa tccagcctgg 104931528

agcccagggc agtccagctg cttccccact ctctccgcca ggcctcagag 104931578

ccagtcccca ggacccctgt tgagccgacc ccttctttcc tcatatttcc 104931628

aggcacctgg gccccctccc tccacaccac atggggcctc ttaggtggtg 104931678

catggtgggg tcacaagttc agaatgggct gggctggcag agccttcagg 104931728

gatttctctc ccgtcacagG CGTCGCCACC AGCACTCTGT CCCCAGGGCC 104931778

GCACCCGGGA CCTGGAGGCG CTGCTGGCGG TGATGGGGAG CGCCCAGGAG 104931828 A323V

TTCATCTATG CCTCCGTGAT GGAGTATTTC CCCACCACGC GCTTCAGCCA 104931878

CCCCCCGAGg taggtctgag tgggaggtgg gcggcctgct ctgctgacgg 104931928

gcagctcctg ggcacgtccc ctcctgctgg gacccctatc gggcccggct 104931978

tgtaagcaga gccccgtccc tccccacccc aagGTACTGG CCGGTGCTGG 104932028

ACAACGCGCT GCGGGCGGCA GCCTTCGGCA AGGGCGTGCG CGTGCGCCTG 104932078 A364Rfs*45

CTGGTCGGCT GCGGACTCAA CACGGACCCC ACCATGTTCC CCTACCTGCG 104932128

GTCCCTGCAG GCGCTCAGCA ACCCCGCGGC CAACGTCTCT GTGGACGTGg 104932178

tgagggcgtg ctcccggccg ggcgtgggaa aggcggccct cctgccgccc 104932228

ttcctgacgc gctgcctctg ctcccctaag AAAGTCTTCA TCGTGCCGGT 104932278

GGGGAACCAT TCCAACATCC CATTCAGCAG GGTGAACCAC AGCAAGTTCA 104932328

TGGTCACGGA GAAGGCAGCC TACATAGgtg agcgcgatca gatcacggcg 104932378

ggcgggcccc agggtggcca ggcacgggcg agggaggcac tggctttgtg 104932428

accggcgtgg acacctcagg agggaggggc tgctgctgaa gggggacggg 104932478

gtctccatgg agttccgggg accaggccac ccgcctgtca cctggcccca 104932528

cagggcccca gaacactgag tcaggacgcc tgtccccaag tgatgaaggt 104932578

ggagttctac cgcgaccagc tgtccctccc gcacctaagc gaggggcttc 104932628

cccggctgga gtctgatgac agtggagggg ccagctgcca accgtcccca 104932678

aacccgtagc cgggcctggc gctgagcggg ctgcagaggg gcctgtggga 104932728

gccggcgccc cagtgtctcc tccatcctcc ccgcagGCAC CTCCAACTGG 104932778

TCGGAGGATT ACTTCAGCAG CACGGCGGGG GTGGGCTTGG TGGTCACCCA 104932828 G457D

GAGCCCTGGC GCGCAGCCCG CGGGGGCCAC GGTGCAGGAG CAGCTGCGGC 104932878

AGCTCTTTGA GCGGGACTGG AGTTCGCGCT ACGCCGTCGG CCTGGACGGA 104932928

CAGGCTCCGG GCCAGGACTG CGTTTGGCAG GGCTGAGGGG GGCCTCTTTT 104932978

TCTCTCGGCG ACCCCGCCCC GCACGCGCCC TCCCCTCTGA CCCCGGCCTG 104933028

GGCTTCAGCC GCTTCCTCCC GCAAGCAGCC CGGGTCCGCA CTGCGCCAGG 104933078

AGCCGCCTGC GACCGCCCGG GCGTCGCAAA CCGCCCGCCT GCTCTCTGAT 104933128

TTCCGAGTCC AGCCCCCCCT GAGCCCCACC TCCTCCAGGG AGCCCTCCAG 104933178

GAAGCCCCTT CCCTGACTCC TGGCCCACAG GCCAGGCCTA AAAAAAACTC 104933228

GTGGCTTCcc ggtgcctctg tgtgagtccc gcgcgggcgg cccttcatcc 104933278

tcttgccaag ggcccgcctc tatgcgcccg cccctgcgaa actgcgccgc 104933328

gcgaccgccg tggcagcgcc tcagctagcc ccggggtccgc gagaacctgg 104933378

ggcggggcgg ggcggggacc agacgggcct cccaggcgga gcgaaccctc 104933428

cacctcccac cccgcgccgg gctgccgcgc tccggaaccc aaattcccgc 104933478

cccgaggctg ccgggggaag cgagaggcgc ggagcccacg cccgggactc 104933528

cagcggagga aacgcagacc aaggcgcagc gccgcgcacc caccgccagg 104933578

gggcagctcc tacggcgccg gacaggggcg gcgcgggagg ggagcggggc 104933628

tgaggggacc gggagggcgg gaggggacct gcgactgagg ggacagggag 104933678

ggcgggaggc gacccgcggc tgagtgaggg aagggcggga ggggacccgc 104933728

ggctgagggg accgggaggg cgggaggcga cccgcggctg agtgagggga 104933778

gggtgggagg ggacccgcgg ctgaggggac agggagggcg ggaggggacc 104933828

cgcggctgag gggaccggga gggcgggagg cgacccgggg ctgagtgagg 104933878

ggagggcggg aggggagcgg ggctgagggg accgggaggg cgggagggga 104933928

cctgcgactg aggggacggg gaggatgtga ggcgatccgg ggctgagtga 104933978

ggggagggtg ggaggggacc cgcggctgag gggacgggga gggcgggagg 104934028

ggacccgcgg ctgaggggac ggggagggcg ggaggcgacc cggggctgag 104934078

gggacgggga gggcgggagg ggacccgcgg ctgaggggac aggtcctgcg 104934128

tgcgggctgg ggagacaggc gggcgagggt aggggtgcac aaggctgtgt 104934178

ggtttgtggg ctgttgtgca gggtgggtcc aagcatgtgg gggcaggctt 104934228

gtcctggg

PLD4 **(NC_000014.9, GRCh38) - gDNA - 2026-11-26**

