



ADA2 (NM\_001282225.2) - cDNA + Protein - 2025-06-02

AGTTGGTGAG CTTTTCCGGT GCTCTGCACA GATGCTGGGG CGCTGAGCAA -77  
ACAGCCCTCA GTTTCTGGAG CTGTTCCGAG TCCCGTGGAG TCTCCATCTG -27 -43C>T c.-42G>A -31A>G  
AGCCCTTTCC TAGTCCAGGC ATCCCGATGT TGGTGGATGG CCCATCTGAG 24 c.-14G>T M1T P6L  
MetL euValAspGl yProSerGlu 8  
  
CGGCCAGCCC TGTGCTTCTT GCTGTTGGCT GTGGCAATGT CTTTCTTCGG 74 R9W G25C  
ArgProAlaL euCysPheLe uLeuLeuAla ValAlaMetS erPhePheGl 25  
  
CTCAGCTCTA TCCATAGATG AAACACGGGC GCATCTGTTG TTGAAAGAAA 124 I30T T33Nfs\*29 R34W  
ySerAlaLeu SerIleAspG luThrArgAl aHisLeuLeu LeuLysGluL 42  
  
AGATGATGCG GCTGGGGGGG CCGCTGGTGC TGAACACCAA GGAGGAGCTG 174 R45W c.138G>C G47R G47W G47R\_GC G47A G47V G48R c.144delG R49Afs\*13 R49W c.158del N53N  
  
K13del  
ysMetMetAr gLeuGlyGly ArgLeuValL euAsnThrLy sGluGluLeu 58  
  
GCCAATGAGA GGCTCATGAC GCTCAAATC GCTGAGATGA AGGAGGCCAT 224  
AlaAsnGluA rgLeuMetTh rLeuLysIle AlaGluMetL ysGluAlaMe 75  
  
GAGGACCCTG ATATTCCCAC CCAGCATGCA CTTTTTCCAG GCCAAGCAATC 274 c.232\_322+105delinsATG H91R H91Lfs  
tArgThrLeu IlePheProp roSerMetHi sPhePheGln AlaLysHisL 92

TCAT**T**GTGAGAG AAGTCAAGTG TTTAATATTC TAAGGATGAT **G**CCAAA**A**GGG 324 [I93T](#) [P106S](#) [p.A109Lfs\\*11](#)  
euIleGluAr gSerGlnVal PheAsnIleL euArgMetMe tProLysGly 108

**G**CTGCCT**T**GC **A**CC**T**CCATGA **C**ATTGGC**A**T**C** GTGACTATGG ACTGGCTGGT 374 [A109D](#) [H112Y](#) [H112Q](#) [I16Lfs\\*4](#)  
AlaAlaLeuH isLeuHisAs pIleGlyIle ValThrMetA spTrpLeuVa 125

GAGGAATG**T**C **A**CC**T**A**C**AG**G**C **C**T**C**ACT**G**CCA CATCTGTTTC ACC**C**CAAGGG 424 [T129P](#) [p.\(Y130Sfs\\*48\)](#) [R131Sfs](#) [c.396\\_397del](#) [C134Y](#)  
lArgAsnVal ThrTyrArgP roHisCysHi sIleCysPhe ThrProArgG 142

**G**G**A**TCATGCA GTTCAGATTT GCTCACC**C**AA CTCCCCG**T**CC **A**TCAGAAAAA 474 [I143Sfs\\*41](#) [P151OfsX](#) [P155Hfs\\*29](#)  
lyIleMetGl nPheArgPhe AlaHisProT hrProArgPr oSerGluLys 158

**T**G**T**TC**C**AA**G**T **G**GATTCTGCT GGAGGATTAT **C**GGAAGCGGG TGCAGAACGT 524 [C159Y](#) [W162R](#) [R169G](#) [R169Q](#)  
CysSerLysT rpIleLeuLe uGluAspTyr ArgLysArgV alGlnAsnVa 175

**C**ACTGAG**T**TT **G**ATGACAGCT TGC**T**GAGGAA TTT**C**A**C**T**C**TG GTGACCCAGC 574 [F178S](#) [L183P](#) [T187P](#) [L188V](#) [L188P](#)  
lThrGluPhe AspAspSerL euLeuArgAs nPheThrLeu ValThrGlnH 192

**A**CC**C**GGAGGT GATTTACACA AACC**A**AAATG TTG**T**CTG**G**T**C** GAAAT**T**TGAA 624 [P193L](#) [V203A](#) [W204C](#) [G>T](#) [W204C](#) [F207S](#)  
isProGluVa lIleTyrThr AsnGlnAsnV alValTrpSe rLysPheGlu 208

**A**CC**A**T**C**T**T**C**T** TCACCATCTC TGGTCTCATC CATT**A**C**G**CAC CAGTGTTCAG 674 [I210Tfs](#) [F212del](#) [Y220X](#)  
ThrIlePheP heThrIleSe rGlyLeuIle HisTyrAlaP roValPheAr 225

**A**GACT**A**TGTC TTCCGGAGCA **T**GCAGGAGTT **C**T**A**C**G**AG**G**AC AACGTGCTCT 724 [Y227fs](#) [M232T](#) [Y236del](#) [c.709delC](#) [\(p.Glu237fs\)](#) [D238N](#) [A247Ofs\\*16](#)  
gAspTyrVal PheArgSerM etGlnGluPh eTyrGluAsp AsnValLeuT 242

**A**CA**T**GG**A**GAT CAGAG**C**CAGG **C**T**G**CTG**C**CGG TGTATGAGCT CAGTGGAGAG 774 [M243R](#) [E244A](#) [A247V](#) [L249P](#) [P251L](#) [P251P](#)

yrMetGluIl eArgAlaArg LeuLeuProV alTyrGluLe uSerGlyGlu 258

CACCATGACG AAGAGTGGTC AGTGAAGACT TACCAGGAAG TAGCTCAGAA 824 [D261Pfs\\*2](#) [W264S](#) [W264Ter](#) [S265X](#)

HisHisAspG luGluTrpSe rValLysThr TyrGlnGluV alAlaGlnLy 275

GTTTGTGGAA ACTCACCCCTG AGTTIATTGG AATCAAAATC ATTTATTGG 874 [F283L](#) [S291L](#)

sPheValGlu ThrHisProG luPheIleGl yIleLysIle IleTyrSerA 292

ATCACAGATC CAAAGATGTG GCTGTCATCG CAGAATCCAT CCGAATGGCC 924 [R306\\*](#)

spHisArgSe rLysAspVal AlaValIleA laGluSerIl eArgMetAla 308

ATGGGGCTCC GAATCAAGTT CCCCACGGTG GTGGCAGGGT TTGACCTGGT 974 [M309I](#) [L311R](#) [R312ter](#) [T317M](#) [G321E](#) [G321A](#) [delEx7](#) [Dup Exon7](#)

MetGlyLeuA rgIleLysPh eProThrVal ValAlaGlyP heAspLeuVa 325

GGGGCATGAG GACACTGGCC ACTCCTTGCA TGACTIONAAG GAAGCTCTGA 1024 [G326V](#) [E328K](#) [E328D](#) [D329N](#) [H335R](#)

lGlyHisGlu AspThrGlyH isSerLeuHi sAspTyrLys GluAlaLeuM 342

TGATCCCGC CAAGGATGGC GTTAAGCTGC CTIACCTTCTT CCACGCCGGA 1074 [P344L](#) [V349I](#) [L351Q](#) [Y353H](#) [F355L](#) [A357T](#) [G358R](#)

etIleProAl aLysAspGly ValLysLeuP roTyrPhePh eHisAlaGly 358

GAAACAGACT GGCAGGGTAC TTCCATAGAC AGGAACTTC TGGATGCTCT 1124 [T119A](#) [N370K](#)

GluThrAspT rpGlnGlyTh rSerIleAsp ArgAsnIleL euAspAlaLe 375

GATGCTGAAC ACTACCAGAA TCGGCCATGG ATTTGCTTTG AGCAAACAAC 1174 [G142S](#) [G383D](#) [H391Q](#)

uMetLeuAsn ThrThrArgI leGlyHisGl yPheAlaLeu SerLysHisP 392

CCGCAGTCAG GACTTACTCC TGGAAAAAGG ACATCCCCAT AGAAGTCTGT 1224 [W399X](#) [I405L](#) [C408Y](#)

roAlaValAr gThrTyrSer TrpLysLysA spIleProIl eGluValCys 408

CCCATCTCTA ACCAGGTGCT GAAACTGGTG TCTGACTTGA GGAACCACCC 1274 P409S P409H V372M N423K P425A

ProIleSerA snGlnValLe uLysLeuVal SerAspLeuA rgAsnHisPr 425

TGTAGCCACT CTGATGGCCA CTGGGCACCC CATGGTGATC AGCTCTGATG 1324 P435A M436T

oValAlaThr LeuMetAlaT hrGlyHisPr oMetValIle SerSerAspA 442

ACCAGCTAT GTTGGTGCC AAAGGCTTGT CCTATGATTT CTATGAGGTC 1374 P443A M445T F404S K449Nfs\*2 G450C L451W L451F Y453C Y453Y D454H Y456C V458D

spProAlaMe tPheGlyAla LysGlyLeuS erTyrAspPh eTyrGluVal 458

TTCATGGGCA TTGGGGGGAT GAAGGCTGAC CTGAGGACCC TCAAACAGCT 1424 P.(M460K) M465fsX K466Tfs\*2

PheMetGlyI leGlyGlyMe tLysAlaAsp LeuArgThrL euLysGlnLe 475

GGCCATGAAC TCTATCAAGT ACAGTACCCT GTTGGAGAGT GAGAAAAATA 1474 S479P Y482C S483Pfs\* E489Q E489D

uAlaMetAsn SerIleLysT yrSerThrLe uLeuGluSer GluLysAsnT 492

CTTTCATGGA AATCTGGAAG AAGAGATGGG ATAAGTTCAT AGCAGATGTG 1524 W501\*

hrPheMetGl uIleTrpLys LysArgTrpA spLysPheIl eAlaAspVal 508

GCTACAAAGT GAGGAGAAGC TAGCCAGCCC TCTACAAGCT GTCTTCTTGC \*38

AlaThrLysS top

ACACGCTGTC ACTTCCTCTC ACTCGTTCCT GAATCAGCTC CATGTGCCCA \*88

TGAAATCAAT GGCCTCTGTA TGGAGCGACC CTGTGAGAAG CACTTGGCTG \*138

GCTGAGCAA TTCATCCTCT GGAAATATTC TCTCTCAGCC ACAGTGACAT \*188 \*159G>A

TGACCCTCTT GGTTTTCTCC TGTCTCTGGC CATTTCTTCC AGTTTCCCTA \*238

TTTCAGAGTC TTCTCCTCTC TCTGATCTCT GTGCTGTTTC CTCAGGACTC \*288

AGTCCTGGGC TCTCTTCTAT TCTGGTCTCT TTATTTTTTT ATTTTTGTAT \*338

TTTTTCGAGA TGGAGTTTTG CTCTTGTTC CCAGGCTGGA GTACAATGGT \*388  
GCGATCTCAG CTCAGTGCAA CCTCCGCCAC CCGGGTTCAG GCAATTCTCT \*438  
TGCATCAGCC TCGCGAGTAG TTGGAATTAT AGGCATGTGC CACCACACCC \*488  
AGCTGATTTT TGCATTTTTA GTAGAGACAG GTTTTCACCA TGTTGGCGAG \*538  
GCTGGTATCC AACTCTTGAC CTCAGGTGAT CCACTCGCCC CTTGGCTCCC \*588  
AAAGTGCTGG AATTACAGGC ATTAGCCACC ATGCCTGGCC TATTCTGGTC \*638  
TCTTTAACTC TCTCCTCTTT ATTTCTCTTC TCTCTCTGTA CACTTTTCCT \*688  
GGGTGGTCTC ATCCATTCCT TTGCTTTTTT ATACCATTTA TTTGTTAATG \*738  
ATTCCCACAT TTATTTATGC ACTTGGAGAG CTCACAGGAA TCTCAGAAAC \*788  
TGATGAGGTA CAATTCTGAA CCCTCAGTCT CTTCCCTTTA AACCTTCTT \*838  
TTTCTCTACT TTAATTTTTT TAAAGAGTGT CTTGCTATGT TGCCCAGGCT \*888  
GGTCTCCAAC TCAAGTGATC CTCCTGCCGC AGTCTCCCGA AGTGCTGGGA \*938  
TTACTGACAT GAGCCACCAC ACTCAGCCCT TTAAACCTTT CCCTGGCCTT \*988  
TCCCATAGCT GGTGAAGGAC ACCTCCATCC ATTCCACGCA GTTGCTCAA \*1038  
GCAGAAATTT TCAGTGCAAG TCTTGATGCT GCGCCGTCCC CCACTCCCTA \*1088  
CATCAGAACG CATCCCTCAT CTGGACTCCA GCGGTGGCTT CTTGATGCTG \*1138  
CGCGGTCCCC CACTCCCTAC ATCAGAATGC ATCCCGCATC CAGACTCCAG \*1188  
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TGCTTGAGCT ATGACAACAG CCTCCTCACT GATCTCCCCT TTCTTCCCTT \*1288  
TGCTCCTCC AGCTCATTTT TCACAGTGTA GAATGACATT TTGTTTGT \*1338  
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CAGCGGTGCG ATCTCGGCTC ACTGCAACCT CCACCTCCCG GGTCAAGCG \*1438  
GATTCTCGTG CCTCAGCCTC CTGAGTAGCT GGGATTACAG GCATGCACCA \*1488  
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TTTAATCTGG ATCCATTCCG GCGCCTTCCT CTCCCAGTCA CCCAGAGGGC \*1788  
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GCCTGGGTCT TTTCTCTTTC TCTCTGCCTG GAAGATTCCT TCTTTCCCCT \*1888  
TTTGTCTTGC CCACTCCTGT TTACCCTTCA AGTTTCAAGT TCATGTCACT \*1938  
GTCTCAGAGA GGTTTTCCCTG TGCTCGCCCT GTTTCTCTCA GGAAGCCTTG \*1988  
CTCTTTTCCA TCATGCCTCT AATCACAGCT TATAATCGGA TATTTATTTT \*2038  
TGTGTCTACA GTCTTGCCCT GCCAGACTGT ATGCCCATG TGGGCAGGCG \*2088  
CTCATGATTG TTTCTGATTG TTTACGCGAT GCTGCTAACC CAGAGCCTGG \*2138  
GCCCAAAGCT AGTTAGTACT CAATAAACAA TGCATTGAAT GAGTGGCTGT \*2188  
CACTGTGTCT GTTCAGCCAG CTGCCAAGGC AGAGGGGAGT AGAGCAGAGC \*2238  
CGCCCCAAAT AAAAGACCTC ATGTGATCAG AGTCCAGCTC CTCACCTGGC \*2288  
CTTGGAAGAA GGATGCAAGA AGCCACCTCT GTCCTCACCC AACTCAAGGA \*2338  
TGGCAGGGAA TCAAAGAATT CCTCAAAAGC CCCAGGCGAA TGTCCTCTCA \*2388  
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GTCCCAACTG CGCAGGGGAC CTCCAACACA GGCAGACGCA AACAGCCTCT \*2638  
GGCCTGGACT TGCTGTGATC TCTGATTTGG CAAAATGAAC CAGCAATAGT \*2688  
CTTGC

ADA2 (NM\_001282225.2) - cDNA + Protein - 2025-06-02

