



## UBA1 (NM\_003334.4) - cDNA + Protein - 2024-12-22

ATCTTGTGTC GCGGCTCGG CTGTAAGGAG GTGGCAGGGA CAACCACAAC -147

CACAACGGCC GGGGGAGGAG AAGGCGGCAG CGGCGATTCT AGGCGGCCCA -97

GGCGGCGGGG AGGAGGAGAA GGAGGAGGGT GGCGGCCGGG CTTGGCTTCG -47

GCTCCTTGAG GAGTTGGCGG CGGCGCGACC CGGGGAACCG GCATTGATGT 4

MetS 2

CCAGCTCGCC GCTGTCCAAG AAACGTCGCG TGTCCGGGCC TGATCCAAAG 54

erSerSerPr oLeuSerLys LysArgArgV alSerGlyPr oAspProLys 18

CCGGTTCCTA ACTGCTCCCC TGCCCAGTCC GTGTTGTCCG AAGTGCCCTC 104

ProGlySerA snCysSerPr oAlaGlnSer ValLeuSerG luValProSe 35

GGTGCCAACC AACGGAATGG CCAAGAACGG CAGTGAAGCA GACATAGACG 154 c.118-1G>C G40A M41V M41L M41L\_A>T M41T

rValProThr AsnGlyMetA laLysAsnGl ySerGluAla AspIleAspG 52

AGGGCCTTTA CTCCCGGCAG CTGTATGTGT TGGGCCATGA GGCAATGAAG 204 S56E

luGlyLeuTy rSerArgGln LeuTyrValL euGlyHisGl uAlaMetLys 68

CGGCTCCAGA CATCCAGTGT CCTGGTATCA GGCCTGCGGG GCCTGGGCGT 254

ArgLeuGlnT hrSerSerVa lLeuValSer GlyLeuArgG lyLeuGlyVa 85

GGAGATCGCT AAGAACATCA TCCTTGGTGG GGTCAAGGCT GTTACCCTAC 304

lGluIleAla LysAsnIleI leLeuGlyGl yValLysAla ValThrLeuH 102

ATGACCAGGG CACTGCCCAG TGGGCTGATC TTTCCCTCCCA GTTCTACCTG 354

isAspGlnGl yThrAlaGln TrpAlaAspL euSerSerGl nPheTyrLeu 118

CGGGAGGAGG ACATCGGTAA AAACCGGGCC GAGGTATCAC AGCCCCGCCT 404

ArgGluGluA spIleGlyLy sAsnArgAla GluValSerG lnProArgLe 135

CGCTGAGCTC AACAGCTATG TGCCGTGCAC TGCCTACACT GGACCCCTCG 454

uAlaGluLeu AsnSerTyrV alProValTh rAlaTyrThr GlyProLeuV 152

TTGAGGACTT CCTTAGTGGT TTCCAGGTGG TGGTGCTCAC CAACACCCCC 504

alGluAspPh eLeuSerGly PheGlnValV alValLeuTh rAsnThrPro 168

CTGGAGGACC AGCTGCGAGT GGGTGAGTTC TGTCAACAAC GTGGCATCAA 554

LeuGluAspG lnLeuArgVa lGlyGluPhe CysHisAsnA rgGlyIleLy 185

GCTGGTGGTG GCAGACACGC GGGGCCTGTT TGGGCAGCTC TTCTGTGACT 604

sLeuValVal AlaAspThrA rgGlyLeuPh eGlyGlnLeu PheCysAspP 202

TTGGAGAGGA AATGATCCTC ACAGATTCCA ATGGGGAGCA GCCACTCAGT 654

heGlyGluGl uMetIleLeu ThrAspSerA snGlyGluGl nProLeuSer 218

GCTATGGTTT CTATGGTTAC CAAGGACAAC CCCGGTGTGG TTACCTGCCT 704 T233I

AlaMetValS erMetValTh rLysAspAsn ProGlyValV alThrCysLe 235

GGATGAGGCC CGACACGGGT TTGAGAGCGG GGACTTTGTC TCCTTTTCAG 754

uAspGluAla ArgHisGlyP heGluSerGl yAspPheVal SerPheSerG 252

AAGTACAGGG CATGGTTGAA CTCAACGGAA ATCAGCCCAT GGAGATCAAA 804  
luValGlnGl yMetValGlu LeuAsnGlyA snGlnProMe tGluIleLys 268

GTCCTGGGTC CTTATACCTT TAGCATCTGT GACACCTCCA ACTTCTCCGA 854  
ValLeuGlyP roTyrThrPh eSerIleCys AspThrSerA snPheSerAs 285

CTACATCCGT GGAGGCATCG TCAGTCAGGT CAAAGTACCT AAGAAGATTA 904  
pTyrIleArg GlyGlyIleV alSerGlnVa lLysValPro LysLysIleS 302

GCTTTAAATC CTTGGTGGCC TCACTGGCAG AACCTGACTT TGTGGTGACG 954  
erPheLysSe rLeuValAla SerLeuAlaG luProAspPh eValValThr 318

GACTTCGCCA AGTTTTCTCG CCCTGCCAG CTGCACATTG GCTTCCAGGC 1004  
AspPheAlaL ysPheSerAr gProAlaGln LeuHisIleG lyPheGlnAl 335

CCTGCACCAG TTCTGTGCTC AGCATGGCCG GCCACCTCGG CCCCgCAATG 1054  
aLeuHisGln PheCysAlaG lnHisGlyAr gProProArg ProArgAsnG 352

AGGAGGATGC AGCAGAACTG GTAGCCTTAG CACAGGCTGT GAATGCTCGA 1104  
luGluAspAl aAlaGluLeu ValAlaLeuA laGlnAlaVa lAsnAlaArg 368

GCCCTGCCAG CAGTGCAGCA AAATAACCTG GACGAGGACC TCATCCGGAA 1154  
AlaLeuProA laValGlnGl nAsnAsnLeu AspGluAspL euIleArgLy 385

GCTGGCATAT GTGGCTGCTG GGGATCTGGC ACCCATAAAC GCCTTCATTG 1204  
sLeuAlaTyr ValAlaAlaG lyAspLeuAl aProIleAsn AlaPheIleG 402

GGGGCCTGGC TGCCCAAGAA GTCATGAAGG CCTGCTCCGG GAAGTTCATG 1254

lyGlyLeuAl aAlaGlnGlu ValMetLysA laCysSerGl yLysPheMet 418

CCCATCATGC AGTGGCTATA CTTTGATGCC CTTGAGTGTC TCCCTGAGGA 1304

ProIleMetG lnTrpLeuTy rPheAspAla LeuGluCysL euProGluAs 435

CAAAGAGGTC CTCACAGAGG ACAAGTGCCT CCAGCGCCAG AACCGTTATG 1354

pLysGluVal LeuThrGluA spLysCysLe uGlnArgGln AsnArgTyrA 452

ACGGGCAAGT GGCTGTGTTT GGCTCAGACC TGCAAGAGAA GCTGGGCAAG 1404

spGlyGlnVa lAlaValPhe GlySerAspL euGlnGluLy sLeuGlyLys 468

CAGAAGTATT TCCTGGTGGG TGCGGGGGCC ATTGGCTGTG AGCTGCTCAA 1454 [G477A](#)

GlnLysTyrP heLeuValGl yAlaGlyAla ileGlyCysG luLeuLeuLy 485

GAACTTTGCC ATGATTGGGC TGGGCTGCGG GGAGGGTGGG GAAATCATCG 1504

sAsnPheAla MetIleGlyL euGlyCysGl yGluGlyGly GluIleIleV 502

TTACAGACAT GGACACCATT GAGAAGTCAA ATCTGAATCG ACAGTTTCTT 1554

alThrAspMe tAspThrIle GluLysSerA snLeuAsnAr gGlnPheLeu 518

TTCCGGCCCT GGGATGTCAC GAAGTTAAAG TCTGACACGG CTGCTGCAGC 1604

PheArgProT rpAspValTh rLysLeuLys SerAspThrA laAlaAlaAl 535

TGTGCGCCAA ATGAATCCAC ATATCCGGGT GACAAGCCAC CAGAACCGTG 1654

aValArgGln MetAsnProH isIleArgVa lThrSerHis GlnAsnArgV 552

TGGGTCTGA CACGGAGCGC ATCTATGATG ACGATTTTTT CCAAACCTA 1704

alGlyProAs pThrGluArg IleTyrAspA spAspPhePh eGlnAsnLeu 568

GATGGCGTGG CCAATGCCCT GGACAACGTG GATGCCCCGCA TGTACATGGA 1754

AspGlyValA laAsnAlaLe uAspAsnVal AspAlaArgM etTyrMetAs 585

CCGCCGCTGT GTCTACTACC GGAAGCCACT GCTGGAGTCA GGCACACTGG 1804

pArgArgCys ValTyrTyrA rgLysProLe uLeuGluSer GlyThrLeuG 602

GCACCAAAGG CAATGTGTCAG GTGGTGATCC CCTTCCTGAC AGAGTCGTAC 1854 N606I

lyThrLysGl yAsnValGln ValValIleP roPheLeuTh rGluSerTyr 618

AGTTCCAGCC AGGACCCACC TGAGAAGTCC ATCCCCATCT GTACCCTGAA 1904 S621C

SerSerSerG lnAspProPr oGluLysSer IleProIleC ysThrLeuLy 635

GAACTTCCCT AATGCCATCG AGCACACCCT GCAGTGGGCT CGGGATGAGT 1954

sAsnPhePro AsnAlaIleG luHisThrLe uGlnTrpAla ArgAspGluP 652

TTGAAGGCCT CTTCAAGCAG CCAGCAGAAA ATGTCAACCA GTACCTCACA 2004

heGluGlyLe uPheLysGln ProAlaGluA snValAsnGl nTyrLeuThr 668

GACCCCAAGT TTGTGGAGCG AACACTGCGG CTGGCAGGCA CTCAGCCCTT 2054

AspProLysP heValGluAr gThrLeuArg LeuAlaGlyT hrGlnProLe 685

GGAGGTGCTG GAGGCTGTGC AGCGCAGCCT GGTGCTGCAG CGACCACAGA 2104

uGluValLeu GluAlaValG lnArgSerLe uValLeuGln ArgProGlnT 702

CCTGGGCTGA CTGCGTGACC TGGCCTGCC ACCACTGGCA CACCCAGTAC 2154

hrTrpAlaAs pCysValThr TrpAlaCysH isHisTrpHi sThrGlnTyr 718

TCGAACAACA TCCGGCAGCT GCTGCACAAC TTCCCTCCTG ACCAGCTCAC 2204  
SerAsnAsnI leArgGlnLe uLeuHisAsn PheProProA spGlnLeuTh 735

AAGCTCAGGA GCGCCGTTCT GGTCTGGGCC CAAACGCTGT CCACACCCGC 2254  
rSerSerGly AlaProPheT rpSerGlyPr oLysArgCys ProHisProL 752

TCACCTTTGA TGTCAACAAT CCCCTGCATC TGGACTATGT GATGGCTGCT 2304  
euThrPheAs pValAsnAsn ProLeuHisL euAspTyrVa lMetAlaAla 768

GCCAACCTGT TTGCCAGAC CTACGGGCTG ACAGGCTCTC AGGACCGAGC 2354  
AlaAsnLeuP heAlaGlnTh rTyrGlyLeu ThrGlySerG lnAspArgAl 785

TGCTGTGGCC ACATTCCTGC AGTCTGTGCA GGTCCCCGAA TTCACCCCA 2404  
aAlaValAla ThrPheLeuG lnSerValGl nValProGlu PheThrProL 802

AGTCTGGCGT CAAGATCCAT GTTTCTGACC AGGAGCTGCA GAGCGCCAAT 2454  
ysSerGlyVa lLysIleHis ValSerAspG lnGluLeuGl nSerAlaAsn 818

GCCTCTGTTG ATGACAGTCG TCTAGAGGAG CTCAAAGCCA CTCTGCCAG 2504  
AlaSerValA spAspSerAr gLeuGluGlu LeuLysAlaT hrLeuProSe 835

CCCAGACAAG CTCCCTGGAT TCAAGATGTA CCCCATGAC TTTGAGAAGG 2554  
rProAspLys LeuProGlyP heLysMetTy rProIleAsp PheGluLysA 852

ATGATGACAG CAACTTTCAT ATGGATTTCA TCGTGGCTGC ATCCAACCTC 2604  
spAspAspSe rAsnPheHis MetAspPheI leValAlaAl aSerAsnLeu 868

CGGGCAGAAA ACTATGACAT TCCTTCTGCA GACCGGCACA AGAGCAAGCT 2654

ArgAlaGluA snTyrAspIl eProSerAla AspArgHisL ysSerLysLe 885

GATTGCAGGG AAGATCATCC CAGCCATTGC CACGACCACA GCAGCCGTGG 2704 I894S

uIleAlaGly LysIleIleP roAlaIleAl aThrThrThr AlaAlaValV 902

TTGGCCTTGT GTGTCTGGAG CTGTACAAGG TTGTGCAGGG GCACCGACAG 2754

alGlyLeuVa lCysLeuGlu LeuTyrLysV alValGlnGl yHisArgGln 918

CTTGACTCCT ACAAGAATGG TTTCCCTCAAC TTGGCCCTGC CTTTCTTTGG 2804

LeuAspSerT yrLysAsnGl yPheLeuAsn LeuAlaLeuP roPhePheGl 935

TTTCTCTGAA CCCCTTGCCG CACCACGTCA CCAGTACTAT AACCAAGAGT 2854

yPheSerGlu ProLeuAlaA laProArgHi sGlnTyrTyr AsnGlnGluT 952

GGACATTGTG GGATCGCTTT GAGGTACAAG GGCTGCAGCC TAATGGTGAG 2904

rpThrLeuTr pAspArgPhe GluValGlnG lyLeuGlnPr oAsnGlyGlu 968

GAGATGACCC TCAAACAGTT CCTCGACTAT TTTAAGACAG AGCACAAATT 2954

GluMetThrL euLysGlnPh eLeuAspTyr PheLysThrG luHisLysLe 985

AGAGATCACC ATGCTGTCCC AGGGCGTGTC CATGCTCTAT TCCTTCTTCA 3004

uGluIleThr MetLeuSerG lnGlyValSe rMetLeuTyr SerPhePheM 1002

TGCCAGCTGC CAAGCTCAAG GAACGGTTGG ATCAGCCGAT GACAGAGATT 3054

etProAlaAl aLysLeuLys GluArgLeuA spGlnProMe tThrGluIle 1018

GTGAGCCGTG TGTCTGAAGCG AAAGCTGGGC CGCCACGTGC GGGCGCTGGT 3104

ValSerArgV alSerLysAr gLysLeuGly ArgHisValA rgAlaLeuVa 1035

GCTTGAGCTG TGCTGTAACG ACGAGAGCGG CGAGGATGTC GAGGTTCCCT 3154

lLeuGluLeu CysCysAsnA spGluSerGl yGluAspVal GluValProT 1052

ATGTCCGATA CACCATCCGC TGA~~CCCCGTC~~ TGCTCCTCTA GGCTGGCCCC \*27

yrValArgTy rThrIleArg Stop

TTGTCCACCC CTCTCCACAC CCCTTCCAGC CCAGGGTTCC CATTGGCTT \*77

CTGGCAGTGG CCCAACTAGC CAAGTCTGGT GTTCCCTCAT CATCCCCCTA \*127

CCTGAACCCC TCTTGCCACT GCCTTCTACC TTGTTTGAAA CCTGAATCCT \*177

AATAAAGAAT TAATAACTCC CA

**UBA1 (NM\_003334.4) - cDNA + Protein - 2024-12-22**

