Saccharomyces cerevisiae S288C alcohol dehydrogenase ADH1 (ADH1), partial mRNA

NCBI Reference Sequence: NM_001183340.1

FASTA Graphics

Go to:

LOCUS NM_001183340 1047 bp mRNA linear PLN 30-JUN-2025
DEFINITION Saccharomyces cerevisiae S288C alcohol dehydrogenase ADH1 (ADH1), partial mRNA.
ACCESSION NM_001183340
VERSION NM_001183340.1
DBLINK BioProject: PRJNA128
KEYWORDS RefSeq.
SOURCE Saccharomyces cerevisiae S288C
ORGANISM Saccharomyces cerevisiae S288C
Eukaryota; Fungi; Dikarya; Ascomycota; Saccharomycotina; Saccharomycetes; Saccharomycetales; Saccharomycetaceae; Saccharomyces.
REFERENCE 1 (bases 1 to 1047)
AUTHORS Engel,S.R., Wong,E.D., Nash,R.S., Aleksander,S., Alexander,M., Douglass,E., Karra,K., Miyasato,S.R., Simison,M., Skrzypek,M.S., Weng,S. and Cherry,J.M.
TITLE New data and collaborations at the Saccharomyces Genome Database: updated reference genome, alleles, and the Alliance of Genome Resources
JOURNAL Genetics 220 (4) (2022)
PUBMED 34897464
REFERENCE 2 (bases 1 to 1047)
AUTHORS Dujon,B., Albermann,K., Aldea,M., Alexandraki,D., Ansorge,W., Arino,J., Benes,V., Bohn,C., Bolotin-Fukuhara,M., Bordonne,R., Boyer,J., Camasses,A., Casamayor,A., Casas,C., Cheret,G., Cziepluch,C., Daignan-Fornier,B., Dang,D.V., de Haan,M., Delius,H., Durand,P., Fairhead,C., Feldmann,H., Gaillon,L., Kleine,K. et al.
TITLE The nucleotide sequence of Saccharomyces cerevisiae chromosome XV
JOURNAL Nature 387 (6632 SUPPL), 98-102 (1997)
PUBMED 9169874
REFERENCE 3 (bases 1 to 1047)
AUTHORS Goffeau,A., Barrell,B.G., Bussey,H., Davis,R.W., Dujon,B., Feldmann,H., Galibert,F., Hoheisel,J.D., Jacq,C., Johnston,M., Louis,E.J., Mewes,H.W., Murakami,Y., Philippsen,P., Tettelin,H. and Oliver,S.G.
TITLE Life with 6000 genes
JOURNAL Science 274 (5287), 546 (1996)
PUBMED 8849441
REFERENCE 4 (bases 1 to 1047)
CONSRTM NCBI Genome Project

```
  TITLE     Direct Submission
  JOURNAL   Submitted (30-JUN-2025) National Center for Biotechnology
            Information, NIH, Bethesda, MD 20894, USA
REFERENCE   5  (bases 1 to 1047)
  CONSRTM   Saccharomyces Genome Database
  TITLE     Direct Submission
  JOURNAL   Submitted (16-JAN-2015) Department of Genetics, Stanford
            University, Stanford, CA 94305-5120, USA
  REMARK    Protein update by submitter
REFERENCE   6  (bases 1 to 1047)
  CONSRTM   Saccharomyces Genome Database
  TITLE     Direct Submission
  JOURNAL   Submitted (04-MAY-2012) Department of Genetics, Stanford
            University, Stanford, CA 94305-5120, USA
  REMARK    Protein update by submitter
REFERENCE   7  (bases 1 to 1047)
  CONSRTM   Saccharomyces Genome Database
  TITLE     Direct Submission
  JOURNAL   Submitted (31-MAR-2011) Department of Genetics, Stanford
            University, Stanford, CA 94305-5120, USA
  REMARK    Sequence update by submitter
REFERENCE   8  (bases 1 to 1047)
  CONSRTM   Saccharomyces Genome Database
  TITLE     Direct Submission
  JOURNAL   Submitted (27-MAY-2010) Department of Genetics, Stanford
            University, Stanford, CA 94305-5120, USA
  REMARK    Protein update by submitter
REFERENCE   9  (bases 1 to 1047)
  CONSRTM   Saccharomyces Genome Database
  TITLE     Direct Submission
  JOURNAL   Submitted (14-DEC-2009) Department of Genetics, Stanford
            University, Stanford, CA 94305-5120, USA
COMMENT     REVIEWED REFSEQ: This record has been curated by SGD. This record
            is derived from an annotated genomic sequence (NC_001147).

            ##Genome-Annotation-Data-START##
            Annotation Provider :: SGD
            Annotation Status   :: Full Annotation
            Annotation Version  :: R64-4-1
            URL                 :: http://www.yeastgenome.org/
            ##Genome-Annotation-Data-END##
            COMPLETENESS: incomplete on both ends.
FEATURES             Location/Qualifiers
     source          1..1047
```

/organism="Saccharomyces cerevisiae S288C"
/mol_type="mRNA"
/strain="S288C"
/db_xref="taxon:559292"
/chromosome="XV"

gene <1..>1047
/gene="ADH1"
/locus_tag="YOL086C"
/gene_synonym="ADC1"
/db_xref="GeneID:854068"

CDS 1..1047
/gene="ADH1"
/locus_tag="YOL086C"
/gene_synonym="ADC1"
/EC_number="1.1.1.1"
/EC_number="1.1.1.54"
/EC_number="1.1.1.78"
/experiment="EXISTENCE:direct assay:GO:0004022 alcohol dehydrogenase (NAD+) activity [PMID:6985717]"
/experiment="EXISTENCE:direct assay:GO:0005737 cytoplasm [PMID:2937632]"
/experiment="EXISTENCE:direct assay:GO:0005886 plasma membrane [PMID:16622836]"
/experiment="EXISTENCE:direct assay:GO:0019170 methylglyoxal reductase (NADH) activity [PMID:12722185]"
/experiment="EXISTENCE:direct assay:GO:1904408 melatonin binding [PMID:31708896]"
/experiment="EXISTENCE:genetic interaction:GO:0000947 amino acid catabolic process to alcohol via Ehrlich pathway [PMID:12499363]"
/experiment="EXISTENCE:mutant phenotype:GO:0019655 glycolytic fermentation to ethanol [PMID:15082781]"
/note="Alcohol dehydrogenase; fermentative isozyme active as homo- or heterotetramers; required for the reduction of acetaldehyde to ethanol, the last step in the glycolytic pathway; ADH1 has a paralog, ADH5, that arose from the whole genome duplication"
/codon_start=1
/product="alcohol dehydrogenase ADH1"
/protein_id="NP_014555.1"
/db_xref="GeneID:854068"
/db_xref="SGD:S000005446"
/translation="MSIPETQKGVIFYESHGKLEYKDIPVPKPKANELLINVKYSGVC
HTDLHAWHGDWPLPVKLPLVGGHEGAGVVVGMGENVKGWKIGDYAGIKWLNGSCMACE

```
                     YCELGNESNCPHADLSGYTHDGSFQQYATADAVQAAHIPQGTDLAQVAPILCAGITVY
                     KALKSANLMAGHWVAISGAAGGLGSLAVQYAKAMGYRVLGIDGGEGKEELFRSIGGEV
                     FIDFTKEKDIVGAVLKATDGGAHGVINVSVSEAAIEASTRYVRANGTTVLVGMPAGAK
                     CCSDVFNQVVKSISIVGSYVGNRADTREALDFFARGLVKSPIKVVGLSTLPEIYEKME
                     KGQIVGRYVVDTSK"
ORIGIN
        1 atgtctatcc cagaaactca aaaaggtgtt atcttctacg aatcccacgg taagttggaa
       61 tacaaagata ttccagttcc aaagccaaag gccaacgaat tgttgatcaa cgttaaatac
      121 tctggtgtct gtcacactga cttgcacgct tggcacggtg actggccatt gccagttaag
      181 ctaccattag tcggtggtca cgaaggtgcc ggtgtcgttg tcggcatggg tgaaaacgtt
      241 aagggctgga agatcggtga ctacgccggt atcaaatggt tgaacggttc ttgtatggcc
      301 tgtgaatact gtgaattggg taacgaatcc aactgtcctc acgctgactt gtctggttac
      361 acccacgacg gttctttcca acaatacgct accgctgacg ctgttcaagc cgctcacatt
      421 cctcaaggta ccgacttggc ccaagtcgcc cccatcttgt gtgctggtat caccgtctac
      481 aaggctttga agtctgctaa cttgatggcc ggtcactggg ttgctatctc cggtgctgct
      541 ggtggtctag gttctttggc tgttcaatac gccaaggcta tgggttacag agtcttgggt
      601 attgacggtg gtgaaggtaa ggaagaatta ttcagatcca tcggtggtga agtcttcatt
      661 gacttcacta aggaaaagga cattgtcggt gctgttctaa aggccactga cggtggtgct
      721 cacggtgtca tcaacgtttc cgtttccgaa gccgctattg aagcttctac cagatacgtt
      781 agagctaacg gtaccaccgt tttggtcggt atgccagctg gtgccaagtg ttgttctgat
      841 gtcttcaacc aagtcgtcaa gtccatctct attgttggtt cttacgtcgg taacagagct
      901 gacaccagag aagctttgga cttcttcgcc agaggtttgg tcaagtctcc aatcaaggtt
      961 gtcggcttgt ctaccttgcc agaaatttac gaaaagatgg aaaagggtca aatcgttggt
     1021 agatacgttg ttgacacttc taaataa
//
```