

## 32-2144: ALDH3A1 Recombinant Protein

**Alternative Name :** Aldehyde dehydrogenase 3 family member A1, aldehyde dehydrogenase, dimeric NADP-preferring, ALDH-3, aldehyde dehydrogenase isozyme, ALDHIII, MGC104062, aldehyde dehydrogenase type III, Aldehyde dehydrogenase, stomach aldehyde dehydrogenase,

### Description

Source : Escherichia Coli. ALDH3A1 Human Recombinant produced in E.Coli is a single, non-glycosylated, polypeptide chain containing 473 amino acids (1-453 a.a.) and having a molecular mass of 52.5 kDa. ALDH3A1 is fused to a 20 amino acid His Tag at N-terminus and purified by proprietary chromatographic techniques. ALDH3A1 is involved in the detoxification of alcohol-derived acetaldehyde. ALDH3A1 participates in the metabolism of corticosteroids, biogenic amines, neurotransmitters, and lipid peroxidation. ALDH3A1 oxidizes aromatic aldehyde substrates and toxic aldehydes. ALDH3A1 forms a cytoplasmic homodimer that oxidizes aromatic and medium-chain saturated and unsaturated aldehyde substrates. ALDH3A1 promotes resistance to UV and 4-hydroxy-2-nonenal-induced oxidative damage in the cornea.

### Product Info

**Amount :** 10 µg  
**Purification :** Greater than 95% as determined by SDS-PAGE.  
**Content :** ALDH3A1 solution containing 20mM Tris-HCl pH-8, 0.1M NaCl and 10% glycerol.  
**Storage condition :** Store at 4°C if entire vial will be used within 2-4 weeks. Store, frozen at -20°C for longer periods of time. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Avoid multiple freeze-thaw cycles.  
**Amino Acid :** MGSSHHHHHH SGLVPRGSH MSKISEAVKR ARAAFSSGRT RPLQFRIQQL EALQRLIQEQ  
 EQELVGALAA DLHKNEWNAY YEEVVYVLEE IEYMIQKLPE WAADEPVEKT PQTQQDELYI  
 HSEPLGVVLV IGTWNYPFNL TIQPMVGAIA AGNAVVLKPS ELSENMASLL ATIIPQYLDK  
 DLYPVGINGV PETTELLKER FDHILYTGST GVGKIIMTAA AKHLTPVTLE LGGKSPCYVD  
 KNCDLDVACR RIAWGFMMNS GQTCVAPDYI LCDPSIQNQI VEKLKSLKE FYGEDAKKSR  
 DYGRIISARH FQRMGLIEG QKVAYGGTGD AATRYIAPTI LTDVDPQSPV  
 MQEEIFGPVLPVVCVRSLEE AIQFINQREK PLALYMFSSN DKVIKKMIAE TSSGGVAAND  
 VIVHITLHSL PFGGVGNSGM GSYHGKKSFE TFSHRRSCLV RPLMNDEGLK VRYPPSPAKM  
 TQH.

### Application Note

Specific activity was found to be < 1 units/ml. Activity was obtained by measuring the increase of NADP in absorbance at 340 nm resulting from the reduction of NAD. 1 unit will oxidize 1umole of acetaldehyde to acetic acid per minute at pH 8 at 25°C in the presence of beta-NAD, potassium and thiols.

