

Human ALDH1A3 / RALDH3 Protein (His Tag)



Sino Biological Inc.

Biological Solution Specialist

Catalog Number: 11636-H07E

General Information

Gene Name Synonym:

ALDH1A6, ALDH6, RALDH3

Protein Construction:

A DNA sequence encoding the human ALDH1A3 (NP_000684.2) (Ala 2-Pro 512) was expressed, with a polyhistidine tag at the N-terminus.

Source: Human

Expression Host: E. coli

QC Testing

Purity: > 96 % as determined by SDS-PAGE

Endotoxin:

Please contact us for more information.

Stability:

Samples are stable for up to twelve months from date of receipt at -70 °C

Predicted N terminal: Met

Molecular Mass:

The recombinant human ALDH1A3 consisting of 518 amino acids and migrates as an approximately 57 kDa band in SDS-PAGE under reducing conditions as predicted.

Formulation:

Lyophilized from sterile PBS, 0.5M NaCl, pH 8.0

Normally 5 % - 8 % trehalose and mannitol are added as protectants before lyophilization. Specific concentrations are included in the hardcopy of COA. Please contact us for any concerns or special requirements.

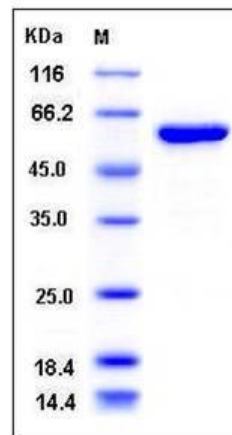
Usage Guide

Storage:

Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

SDS-PAGE:



Reconstitution:

Detailed reconstitution instructions are sent along with the products.

Protein Description

Aldehyde dehydrogenase family 1 member A3, also known as Aldehyde dehydrogenase 6, Retinaldehyde dehydrogenase 3, RALDH-3, ALDH1A3 and ALDH6, is a cytoplasm protein which belongs to the aldehyde dehydrogenase family. Aldehyde dehydrogenase isozymes have been suggested to play a major role in the detoxification of aldehydes generated by alcohol metabolism and lipid peroxidation. ALDH1A3 / ALDH6 uses retinal as a substrate, either in a free or cellular retinol-binding protein form. It is expressed at low levels in many tissues and at higher levels in salivary gland, stomach, and kidney. ALDH1A3 / ALDH6 recognizes as substrates free retinal and cellular retinol-binding protein-bound retinal. It seems to be the key enzyme in the formation of an RA gradient along the dorso-ventral axis during the early eye development and also in the development of the olfactory system. DHT up-regulation of ALDH1A3 / ALDH6 can increase the oxidation of retinal to RA (retinoic acid) and indirectly affect RA bioactivity and metabolism.

References

1. Everts, H.B. et al., 2004, J Invest Dermatol. 123 (2): 258-63.
2. Marlier, A. et al., 2004, Gene Expr Patterns. 5 (2): 179-85.
3. Trasino, S.E. et al., 2007, Exp Biol Med. 232 (6): 762-71.
4. Everts, H.B. et al., 2007, J Invest Dermatol. 127 (7): 1593-604.

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