# Recombinant ALDH1A1 (Aldehyde Dehydrogenase 1A1) Antibody

Rabbit Monoclonal Antibody [Clone ALDH1A1/13842R]

| Catalog No | Format | Size |
|---|---|---|
| 216-RBM27-P0 | Purified Ab with BSA and Azide at 200ug/ml | 20 ug |
| 216-RBM27-P1 | Purified Ab with BSA and Azide at 200ug/ml | 100 ug |
| 216-RBM27-P1ABX | Purified Ab WITHOUT BSA or Azide at 1.0mg/ml | 100 ug |

| Applications | Tested Dillution | Note |
|---|---|---|
| Immunohistochemistry (IHC) | 1-2ug/ml | 30 min at RT. Staining of formalin-fixed tissues requires heating tissue sections in 10mM Tris with 1mM EDTA, pH 9.0, for 45 min at 95°C followed by cooling at RT for 20 minutes |
| Western Blot (WB) | 2-4ug/ml | |

## Product Details

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|---|---|
| **Clone** | ALDH1A1/13842R |
| **Immunogen** | Recombinant fragment (around aa315-434) of the human ALDH1A1 protein (exact sequence is proprietary) |
| **Host** | Rabbit |
| **Clonality** | Monoclonal |
| **Isotype / Light Chain** | IgG / Kappa |
| **Mol. Weight of Antigen** | 54.86kDa |
| **Cellular Localization** | Axon, Cell projection, Cytoplasm, Cytosol |
| **Species Reactivity** | Human |
| **Positive Control** | Expressed by erythrocytes (at protein level) |

**Optimal dilution for a specific application should be determined.*

## Product Images for Recombinant ALDH1A1 (Aldehyde Dehydrogenase 1A1) Antibody

### Specificity & Comments

Cytosolic dehydrogenase that catalyzes the irreversible oxidation of a wide range of aldehydes to their corresponding carboxylic acid (PubMed:12941160, PubMed:15623782, PubMed:17175089, PubMed:19296407, PubMed:25450233, PubMed:26373694). Functions downstream of retinol dehydrogenases and catalyzes the oxidation of retinaldehyde into retinoic acid, the second step in the oxidation of retinol/vitamin A into retinoic acid (By similarity). This pathway is crucial to control the levels of retinol and retinoic acid, two important molecules which excess can be teratogenic and cytotoxic (By similarity). Also oxidizes aldehydes resulting from lipid peroxidation like (E)-4-hydroxynon-2-enal/HNE, malonaldehyde and hexanal that form protein adducts and are highly cytotoxic. By participating for instance to the clearance of (E)-4-hydroxynon-2-enal/HNE in the lens epithelium prevents the formation of HNE-protein adducts and lens opacification (PubMed:12941160, PubMed:15623782, PubMed:19296407). Also functions downstream of fructosamine-3-kinase in the fructosamine degradation pathway by catalyzing the oxidation of 3-deoxyglucosone, the carbohydrate product of fructosamine 3-phosphate decomposition, which is itself a potent glycating agent that may react with lysine and arginine side-chains of proteins (PubMed:17175089). Also has an aminobutyraldehyde dehydrogenase activity and is probably part of an alternative pathway for the biosynthesis of GABA/4-aminobutanoate in midbrain, thereby playing a role in GABAergic synaptic transmission (By similarity).

### Supplied As

200ug/ml of Ab produced in a mammalian-based expression system. Prepared in 10mM PBS with 0.05% BSA & 0.05% azide. Also available WITHOUT BSA & azide at 1.0mg/ml.

### Storage and Stability

Antibody with azide - store at 2 to 8 °C. Antibody without azide - store at -20 to -80 °C. Antibody is stable for 24 months. Non-hazardous. No MSDS required.

### Limitations and Warranty

This antibody is available for research use only and is not approved for use in diagnosis.There are no warranties, expressed or implied, which extend beyond this description. Company is not liable for any personal injury or economic loss resulting from this product.