

RPES8142

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**Product Information**

<b>Product SKU:</b>	RPES8142	<b>Expression Host:</b>	E.coli	<b>Size:</b>	20µg
<b>Tag:</b>	N-Trx	<b>Reactivity:</b>	Human	<b>Accession:</b>	P00352

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**Additional Information**

<b>Calculated MW:</b>	58.2 kDa	<b>Observed MW:</b>	58 kDa
<b>Sequence:</b>	Thr153-Ser501		

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**Protein Information**

**Background:** Aldehyde dehydrogenase 1 family, member A1 (ALDH1A1), also known as Aldehyde dehydrogenase 1 (ALDH1), or Retinaldehyde Dehydrogenase 1 (RALDH1), is an enzyme that is expressed at high levels in stem cells and that has been suggested to regulate stem cell function. The retinaldehyde dehydrogenase (RALDH) subfamily of ALDHs, composed of ALDH1A1, ALDH1A2, ALDH1A3, and ALDH8A1, regulate development by catalyzing retinoic acid biosynthesis. The ALDH1A1 protein belongs to the aldehyde dehydrogenases family of proteins. Aldehyde dehydrogenase is the second enzyme of the major oxidative pathway of alcohol metabolism. ALDH1A1 also belongs to the group of corneal crystallins that help maintain the transparency of the cornea. Increased ALDH1A1 activity has been found in the stem cell populations of leukemia and some solid tumors. In tumor specimens, increased ALDH1A1 immunopositivity was found not only in secretory type cancer epithelial cells but also in neuroendocrine tumor populations. ALDH1 has been identified as a reliable marker of breast cancer stem cells. ALDH1 expression in primary cancer is an independent prognostic factor in node-positive breast cancer patients. ALDH1A1 plays a key role in normal hematopoiesis, and as a TLX1 transcriptional target, ALDH1A1 may contribute to the ability of this homeoprotein to alter cell fate and induce tumor growth.

<b>Synonyms:</b>	Retinal Dehydrogenase, Aldehyde Dehydrogenase Family 1 Member A, ALDH1A, ALDH-E, HEL, ALDH1A1, ALDC, ALDH-E1, ALDH1, ALDH11, HEL-9, HEL-S-53e, HEL12, PUMB1, RALDH1, Aldehyde Dehydrogenase Cytosolic, Aldehyde Dehydrogenase Family 1 Member A1, ALHDII, PUMB10, RALDH 1, Retinal Dehydrogenase 1
<b>Endotoxin:</b>	< 10 EU/mg of the protein as determined by the LAL method
<b>Formulation:</b>	Lyophilized from a 0.2 µm filtered solution in PBS with 5% Trehalose and 5% Mannitol.
<b>Purity:</b>	> 90% as determined by reducing SDS-PAGE.
<b>Bio-Activity:</b>	Not validated for activity
<b>Storage:</b>	Generally, lyophilized proteins are stable for up to 12 months when stored at -20 to -80°C. Reconstituted protein solution can be stored at 4-8°C for 2-7 days. Aliquots of reconstituted samples are stable at < -20°C for 3 months.