

Aldh1L1

Cat.No. 278-0P; control peptide, 100 µg peptide (lyophilized)

Data Sheet

Reconstitution/Storage	100 µg peptide, lyophilized. For reconstitution add 100 µl H ₂ O to get a 1mg/ml solution in PBS. Then aliquot and store at -20°C until use. Control peptides should also be stored at -20°C when still lyophilized!
Immunogen	Synthetic peptide corresponding to AA 250 to 269 from rat Aldh1L1 (UniProt Id: P28037)
Recommended dilution	Optimal concentrations should be determined by the end-user.
matching antibodies	278 003
Remarks	This control peptide consists of the synthetic peptide (aa 250-269 of rat Aldh1L1) that has been used for immunization. It has been tested in preadsorption experiments and blocks efficiently and specifically the corresponding signal in Western blots. The amount of peptide needed for efficient blocking depends on the titer and on the affinity of the antibody to the antigen.

TO BE USED IN VITRO / FOR RESEARCH ONLY
NOT TOXIC, NOT HAZARDOUS, NOT INFECTIOUS, NOT CONTAGIOUS

Aldehyde dehydrogenase family 1 member L1 (Aldh1L1), also known as 10-formyltetrahydrofolate dehydrogenase (**FDH**) is a cytosolic enzyme involved in folate metabolism. It has been shown to be involved in the regulation of cell proliferation and is downregulated in malignant human tumors and cancer cell lines.

Aldh1L1 is highly expressed in several cell-types like hepatocytes and astrocytes.

Selected General References

Epigenetic Silencing of ALDH1L1, a Metabolic Regulator of Cellular Proliferation, in Cancers.
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Genes & cancer (2011) 2(2): 130-9.

Molecular comparison of GLT1+ and ALDH1L1+ astrocytes in vivo in astroglial reporter mice.
Yang Y, Vidensky S, Jin L, Jie C, Lorenzini I, Frankl M, Rothstein JD
Glia (2011) 59(2): 200-7.

Gene expression profiling of NF-1-associated and sporadic pilocytic astrocytoma identifies aldehyde dehydrogenase 1 family member L1 (ALDH1L1) as an underexpressed candidate biomarker in aggressive subtypes.
Rodriguez FJ, Giannini C, Asmann YW, Sharma MK, Perry A, Tibbetts KM, Jenkins RB, Scheithauer BW, Anant S, Jenkins S, Eberhart CG, et al.
Journal of neuropathology and experimental neurology (2008) 67(12): 1194-204.

A transcriptome database for astrocytes, neurons, and oligodendrocytes: a new resource for understanding brain development and function.

Cahoy JD, Emery B, Kaushal A, Foo LC, Zamanian JL, Christopherson KS, Xing Y, Lubischer JL, Krieg PA, Krupenko SA, Thompson WJ, et al.

The Journal of neuroscience : the official journal of the Society for Neuroscience (2008) 28(1): 264-78.

The folate metabolic enzyme ALDH1L1 is restricted to the midline of the early CNS, suggesting a role in human neural tube defects.

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10-formyltetrahydrofolate dehydrogenase, one of the major folate enzymes, is down-regulated in tumor tissues and possesses suppressor effects on cancer cells.

Krupenko SA, Oleinik NV

Cell growth & differentiation : the molecular biology journal of the American Association for Cancer Research (2002) 13(5): 227-36.