

Product datasheet for **AR09123PU-N**

Fumarase (44-510) Human Protein

Product data:

Product Type:	Recombinant Proteins
Description:	Fumarase (44-510) human recombinant protein, 0.1 mg
Species:	Human
Expression Host:	E. coli
Expression cDNA Clone or AA Sequence:	MASQNSFRIE YDTFGELKVP NDKYYGAQTV RSTMNFKIGG VTERMPTPVI KAFGILKRAA AEVNQDYGLD PKIANAIMKA ADEVAEGKLN DHFPLVWQT GSGTQTNMNV NEVISNRAIE MLGGELGSKI PVHPNDHVNK SQSSNDTFPT AMHIAAAIEV HEVLLPGLQK LHDALDAKSK EFAQIIKIGR THTQDAVPLT LGQEFSGYVQ QVKYAMTRIK AAMPRIYELA AGGTAVGTGL NTRIGFAEKV AAKVAALTGL PFVTAPNKFE ALAAHDALVE LSGAMNTTAC SLMKIANDIR FLGSGPRSLG GELILPENEP GSSIMPGKVN PTQCEAMTMV AAQVMGNHVA VTVGGSNHGF ELNVFKPMMI KNLVHSARLL GDASVSFTEN CVVGIQANTE RINKLMNESL MLVTALNPHI GYDKAAKIAK TAHKNGSTLK ETAIELGYLT AEQFDEWVKP KDMLGPK
Predicted MW:	50.2 kDa
Concentration:	lot specific
Purity:	>95% by SDS - PAGE
Buffer:	Presentation State: Purified State: Liquid purified protein Buffer System: 20 mM Tris-HCl buffer (pH 8.0)
Bioactivity:	Specific: > 1.0 unit/mg, defined as the amount of enzyme that cleaves 1 umole of L-Malate to Fumarate per minute at pH 7.5 at 25°C
Endotoxin:	< 1.0 EU per 1 µg of protein (determined by LAL method)
Preparation:	Liquid purified protein


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Applications:	<p>Protocol: Activity Assay</p> <ol style="list-style-type: none"> 1. Prepare 1.45 ml assay buffer (Assay buffer: 100 mM potassium phosphate, 50 mM L-malic acid). 2. Add 50 ul of recombinant Fumarase protein with various concentrations (0.5 ug, 1 ug, 2ug) in assay buffer. 3. Record the increase in A260 nm for 10 minutes <ul style="list-style-type: none"> - L-Malate (Sigma-Aldrich. Cat. No, M-1000) - 96 well UV plate (Costar, Cat. No, 3635) - plate reader (PerkinElmer, VICTORX3)
Protein Description:	Recombinant Fumarase was expressed in E.coli and was purified by conventional chromatography techniques.
Storage:	Store undiluted at 2-8°C for up to two weeks or (in aliquots) at -20°C or -70°C for longer. Avoid repeated freezing and thawing.
Stability:	Shelf life: one year from despatch.
RefSeq:	NP_000134
Locus ID:	2271
UniProt ID:	P07954 , A0A0S2Z4C3
Cytogenetics:	1q43
Synonyms:	FMRD; HLRCC; HsFH; LRCC; MCL; MCUL1
Summary:	The protein encoded by this gene is an enzymatic component of the tricarboxylic acid (TCA) cycle, or Krebs cycle, and catalyzes the formation of L-malate from fumarate. It exists in both a cytosolic form and an N-terminal extended form, differing only in the translation start site used. The N-terminal extended form is targeted to the mitochondrion, where the removal of the extension generates the same form as in the cytoplasm. It is similar to some thermostable class II fumarases and functions as a homotetramer. Mutations in this gene can cause fumarase deficiency and lead to progressive encephalopathy. [provided by RefSeq, Jul 2008]
Protein Families:	Druggable Genome
Protein Pathways:	Citrate cycle (TCA cycle), Metabolic pathways, Pathways in cancer, Renal cell carcinoma

Product images:

