

Product datasheet

Recombinant GLUD1 protein (Active) ab219093

3 Images

Description

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<b>Product name</b>	Recombinant GLUD1 protein (Active)
<b>Biological activity</b>	Specific activity: ≥ 90 U/mg protein. Unit definition: One unit is defined as the conversion of 1 μmol of α-ketoglutarate into glutamate, in 1 minute at 50°C at pH 8.0
<b>Expression system</b>	Escherichia coli
<b>Protein length</b>	Full length protein
<b>Animal free</b>	No
<b>Nature</b>	Recombinant
<b>Species</b>	Bacillus
<b>Predicted molecular weight</b>	270 kDa
<b>Additional sequence information</b>	From Thermophilic Bacteria. Homohexameric (~ 45 kDa subunit).

Specifications

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Our [Abpromise guarantee](#) covers the use of **ab219093** in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

<b>Applications</b>	Functional Studies
<b>Form</b>	Lyophilized

Preparation and Storage

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<b>Stability and Storage</b>	Shipped at 4°C. Store at -20°C. Constituents: 2.9% Sodium chloride, 0.61% Tris This product is an active protein and may elicit a biological response in vivo, handle with caution.
<b>Reconstitution</b>	Reconstitute in deionized water.

General Info

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<b>Function</b>	May be involved in learning and memory reactions by increasing the turnover of the excitatory
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neurotransmitter glutamate.

### Involvement in disease

Defects in *GLUD1* are the cause of familial hyperinsulinemic hypoglycemia type 6 (HHF6) [MIM:606762]; also known as hyperinsulinism-hyperammonemia syndrome (HHS). Familial hyperinsulinemic hypoglycemia [MIM:256450], also referred to as congenital hyperinsulinism, nesidioblastosis, or persistent hyperinsulinemic hypoglycemia of infancy (PPHI), is the most common cause of persistent hypoglycemia in infancy and is due to defective negative feedback regulation of insulin secretion by low glucose levels. In HHF6 elevated oxidation rate of glutamate to alpha-ketoglutarate stimulates insulin secretion in the pancreatic beta cells, while they impair detoxification of ammonium in the liver.

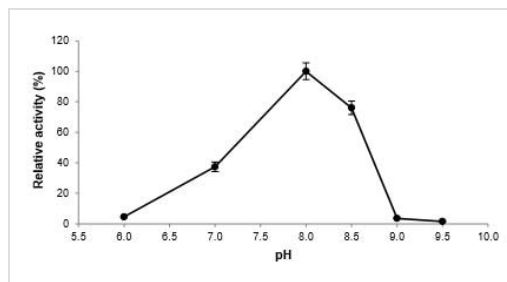
### Sequence similarities

Belongs to the Glu/Leu/Phe/Val dehydrogenases family.

### Cellular localization

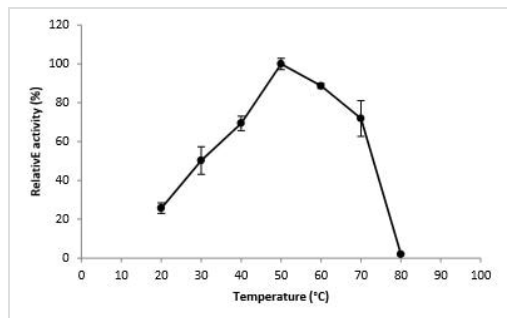
Mitochondrion matrix.

## Images



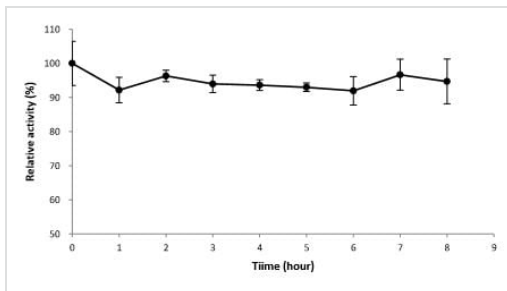
pH dependence of ab219093. Activity was measured by monitoring pH from 6.0 to 9.5 at 50°C

Functional Studies - Recombinant *GLUD1* protein  
(Active) (ab219093)



Temperature dependence of ab219093. Activity was measured by monitoring temperature from 20 to 80°C in 50 mM Tris-HCl buffer (pH 8.0).

Functional Studies - Recombinant *GLUD1* protein  
(Active) (ab219093)



Thermostability analysis of ab219093. Activity was measured by monitoring at 50°C using 50 mM Tris-HCl buffer (pH 8.0).

Functional Studies - Recombinant GLUD1 protein  
(Active) (ab219093)

**Please note:** All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

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