

Glutamate Decarboxylase α (GAD α), *E. coli* Recombinant

CATALOG NO:	P1404-50 50 μ U P1404-200 200 μ U
ALTERNATE NAMES:	GAD-alpha, gadA, gadS
SOURCE:	<i>E.coli</i>
PURITY:	>95% by SDS-PAGE
MOL. WEIGHT:	53.6 kDa with C-terminal 6X-His tag
FORM:	Lyophilized
FORMULATION:	Proprietary Buffer
RECONSTITUTION:	Reconstitute the lyophilized protein in 10% glycerol with 5 mM 2-Mercaptoethanol to a final concentration of 1.0 mU/ml and incubate the reconstituted protein at 25 °C for 15 minutes.
STORAGE CONDITIONS:	Aliquot and store reconstituted enzyme at -20°C. Avoid repeated freeze-thaw cycles.
DESCRIPTION:	Glutamate Decarboxylase α is a pyridoxal 5'-phosphate dependent enzyme. GAD α catalyzes conversion of glutamate to GABA. Aberrant expressions of GAD α have been associated with diabetes and neurodegenerative diseases such as Alzheimers and Parkinson's Disease.
SPECIFIC ACTIVITY:	This enzyme has a specific activity of ≥ 1 mU/mg based on its ability to convert glutamate to GABA, which can be detected fluorometrically at Ex/Em=535/595.
UNIT DEFINATION:	One unit is the amount of enzyme that will hydrolyze 1.0 μ mole of glutamate per minute at pH 8 and 37 °C.

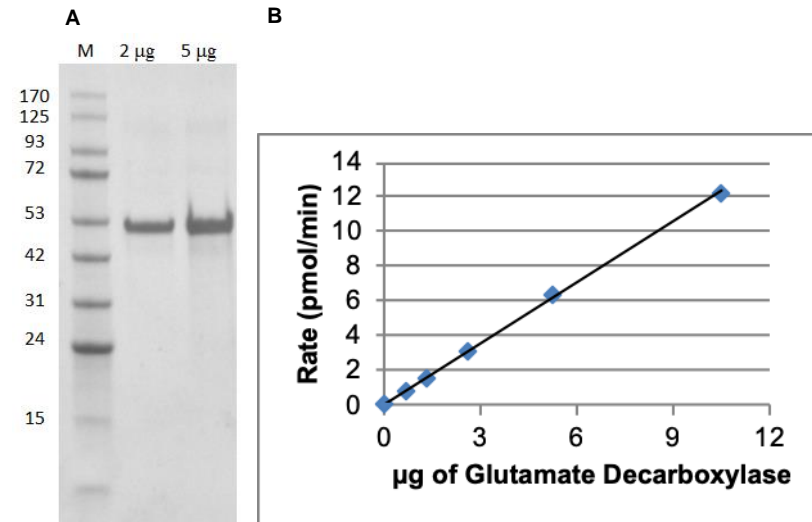


Fig A. SDS-PAGE (4-20%) recombinant GAD: Recombinant protein loaded under reducing conditions and stained with Coomassie Blue. Lane M-MW marker

Fig B. Enzyme activity assay: The activity of GAD α is 1 mU/mg based on its ability to convert glutamate to GABA (BV Cat. No. K729).

RELATED PRODUCTS:

- Glutamate Colorimetric Assay Kit (Cat. No. K629)
- PicoProbe™ Glutamate Assay Kit (Fluorometric) (Cat. No. K413)
- Glutamate Dehydrogenase Activity Colorimetric Assay Kit (Cat. No. K729)
- Glutamate Carboxypeptidase II Inhibitor Screening Kit (Fluorometric) (Cat. No. K440)

FOR RESEARCH USE ONLY! Not to be used on humans.