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Datasheet for 200-1178-0100

Pyruvate Kinase Antibody

Overview

Description:	Anti-Pyruvate Kinase (Rabbit Muscle) (GOAT) Antibody - 200-1178-0100
Item No.:	200-1178-0100
Size:	100 µg
Applications:	WB
Reactivity:	Rabbit
Host Species:	Goat

Product Details

Background:	Pyruvate kinase (PKM) is a glycolytic enzyme that catalyzes the transfer of a phosphoryl group from phosphoenolpyruvate (PEP) to ADP, generating ATP. It stimulates POU5F1-mediated transcriptional activation. There are 4 isozymes of pyruvate kinase in mammals (L, R, M1, M2) encoded by 2 different genes: PKLR and PKM. The L and R isozymes are generated from the PKLR by differential splicing of RNA; the M1 and M2 forms are produced from the PKM gene by differential splicing. L type is major isozyme in the liver, R is found in red cells, M1 is the main form in muscle, heart and brain, and M2 is found in early fetal tissues as well as in most cancer cells. This protein is involved in step 5 of the subpathway that synthesizes pyruvate from D-glyceraldehyde 3-phosphate. Anti-Pyruvate Kinase (Rabbit Muscle) Antibody is ideal for investigators in Cancer, Cell Biology, and Neuroscience.
Synonyms:	goat anti-Pyruvate Kinase Antibody, Pyruvate kinase isozymes M1/M2 antibody, Pyruvate kinase muscle isozyme antibody, Pyruvate kinase 2/3 antibody, Cytosolic thyroid hormone-binding protein antibody, PKM2
Host Species:	Goat
Clonality:	Polyclonal
Format:	IgG

Target Details

Gene Name:	PKM
Reactivity:	Rabbit

Immunogen Type:	Native Protein
Immunogen:	Pyruvate Kinase (Rabbit Muscle)
Purity/Specificity:	Anti-Pyruvate Kinase is an IgG fraction antibody purified from monospecific antiserum by a multi-step process which includes delipidation, salt fractionation and ion exchange chromatography followed by extensive dialysis against the buffer stated above. Assay by immunoelectrophoresis resulted in a single precipitin arc against anti-Goat Serum as well as purified and partially purified Pyruvate Kinase (Rabbit Muscle). This product has been reported to react with all forms of pyruvate kinase (pan M-PK). Cross-reactivity against pyruvate kinase from other mammalian tissues is expected but has not been specifically determined.
Relevant Links:	• UniProtKB - P11974 • NCBI - NP_001182574.1 • GeneID - 100008676

Application Details

Tested Applications:	WB
Application Note:	This affinity purified antibody has been tested in western blot. This antibody is suitable for use in ELISA and immunohistochemistry. Specific conditions for reactivity should be optimized by the end user.
Assay Dilutions:	All assays should be optimized by the user. Recommended dilutions (if any) may be listed below.
ELISA:	1:4,000 - 1:20,000
IHC:	1:500 - 1:2,000
WB:	1:500 - 1:2,000

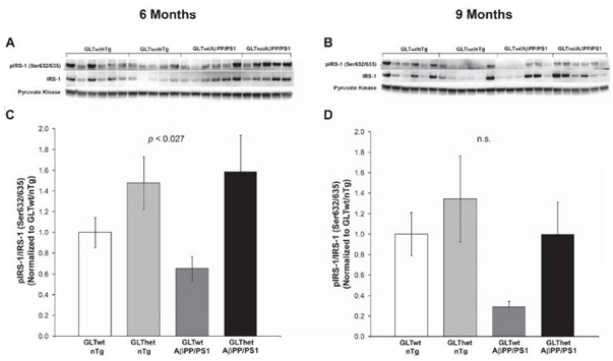
Formulation

Physical State:	Lyophilized
Concentration:	1.0 mg/ml by UV absorbance at 280 nm
Buffer:	0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2
Preservative:	0.01% (w/v) Sodium Azide
Stabilizer:	None
Reconstitution Volume:	100 µL
Reconstitution Buffer:	Restore with deionized water (or equivalent)

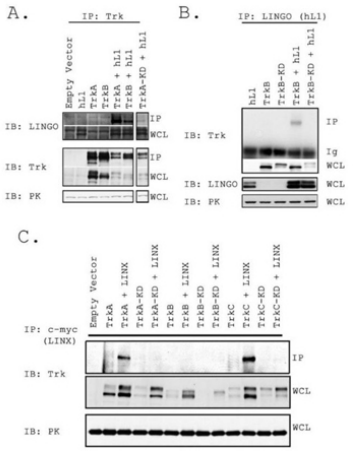
Shipping & Handling

Shipping Condition:	Ambient
Storage Condition:	Store vial at 4° C prior to restoration. For extended storage aliquot contents and freeze at -20° C or below. Avoid cycles of freezing and thawing. Centrifuge product if not completely clear after standing at room temperature. This product is stable for several weeks at 4° C as an undiluted liquid. Dilute only prior to immediate use.
Expiration:	Expiration date is one (1) year from date of receipt.

Images



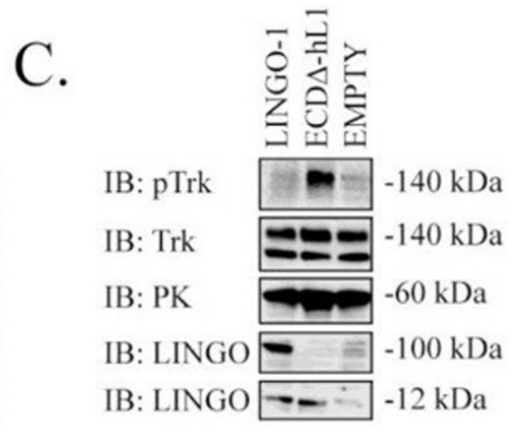
Western Blot
IRS-1 serine phosphorylation is increased by partial loss of GLT-1 at 6 months of age. A, B) Western blots from 6 and 9 month animals, respectively. C, D) Indicating reduced IRS-1 signaling, densitometric quantification of blots in (A) and (B) revealed a statistically significant increase ($p \leq 0.027$) in the ratio of Ser632/635 phosphorylated IRS-1 to total IRS-1 in mice with partial loss of GLT-1, but not animals with an AβPP/PS1 transgene at 6 months of age (C). Phospho-IRS-1/IRS (Ser632/635) ratios were not significantly different in 9-month-old mice (D). Each lane represents one animal. Data are presented as normalized mean ± SEM (n = 5–6 mice per group).
Fig 3. PMID: 25589729



Western Blot

(A) HEK293 cells were transiently transfected with non-tagged wild-type versions of TrkA, TrkB, or kinase-dead TrkA and/or human LINGO-1 (hL1) and harvested 24 hr later. Detergent cell extracts (whole cell extract, WCL) or anti-Trk immunoprecipitates (IP) were subjected to SDS polyacrylamide gel electrophoresis, and immunoblots were probed with anti-Trk or anti-LINGO. Whole cell extract blots were stripped and re-probed with anti-pyruvate kinase (PK) to demonstrate consistency of gel loading. A vertical line demarcation between the TrkA-KD/hL1 sample and other samples indicates where an irrelevant lane was deleted from the image. Under conditions of similar levels of TrkA and TrkB expression, LINGO-1 showed greater association with TrkA, than with TrkB, and reduced association with kinase dead TrkA. (B) Co-immunoprecipitation experiments were performed as in (A) except that immunoprecipitation with anti-LINGO was followed by immunoblotting with anti-Trk. LINGO-1 associated more extensively with kinase-active TrkB than with kinase-dead TrkB. (C) HEK293 cells were transiently transfected with non-tagged native or kinase dead TrkA, TrkB or TrkC and in some cases, with myc-LINX. Detergent cell extracts or anti-myc immunoprecipitates from cell extracts were subjected to SDS polyacrylamide gel electrophoresis. Western blots were probed with anti-Trk to reveal the extent and activity-dependence of Trk/LINX associations.

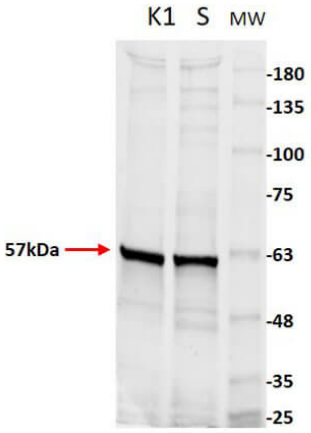
Fig 1. PMID: 26546150



Western Blot

C) ECDΔ-hL1 increases NGF-dependent TrkA activation in a neuronal cell line, PC12. PC12 lines stably transfected with LINGO-1 or ECDΔ-hL1 were treated with 100 ng/ml NGF for 15 minutes and detergent lysates were examined by immunoblot analysis, with antibodies for active tyrosine phosphorylated Trk (pTrk), total Trk, loading control (pyruvate kinase, PK) and LINGO-1. Over-expression of ECDΔ-hL1 diminished LINGO-1 expression and enhanced TrkA activation. Transfection with LINGO-1 increased LINGO-1 expression but did not diminish levels of total or activated TrkA.

Fig 5. PMID: 26546150



Western Blot
Western Blot of Goat Anti-Pyruvate Kinase Antibody. Lane 1: CHO K1 Lysate 10µg. Lane 2: CHO S Lysate 10µg. Lane 3: Opal Pre-stained Molecular Weight Marker (p/n MB-210-0500). Primary Antibody: Goat Anti-Pyruvate Kinase at 1:50 overnight at 2-8°C. Secondary Antibody: Donkey Anti-Goat IgG CY5 conjugate (p/n 605-710-125) at 1:10,000 for 30 mins at RT. Expect: ~57kDa.

References

- Meabon J et al. Intracellular LINGO-1 negatively regulates Trk neurotrophin receptor signaling. *Molecular and Cellular Neurosciences* (2016)
- Meeker K et al. Partial Loss of the Glutamate Transporter GLT-1 Alters Brain Akt and Insulin Signaling in a Mouse Model of Alzheimer's Disease. *Journal of Alzheimer's Disease : Jad* (2015)

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