SANTA CRUZ BIOTECHNOLOGY, INC.

# PGAM5 (E-13): sc-161155

## BACKGROUND

Members of the PGAM (phosphoglycerate mutase) family of proteins are important components of glucose and 2,3-BPGA (2,3-bisphosphoglycerate) metabolism. They are responsible for catalyzing the transfer of phospho groups between the carbon atoms of phosphoglycerates. PGAM5 (phosphoglycerate mutase family member 5), also known as Bcl-xL-binding protein v68, is a 289 amino acid protein belonging to the BPG-dependent PGAM subfamily. PGAM5 exists as two isoforms produced by alternative splicing events, with isoform two localized to the cytoplasm and isoform one localized to both the cytoplasm and the nucleus. PGAM5 forms a dimer and has been found to interact with Bcl-xS/L and Keap1.

## REFERENCES


1. Zhang, J., et al. 2001. Mouse phosphoglycerate mutase M and B isozymes: cDNA cloning, enzyme activity assay and mapping. Gene 264: 273-279.
2. Hammond, P.W., et al. 2001. *In vitro* selection and characterization of selection and characterization of Bcl-X(L)-binding proteins from a mix of tissue-specific mRNA display libraries. J. Biol. Chem. 276: 20898-20906.
3. Jin, J., et al. 2004. Proteomic, functional, and domain-based analysis of *in vivo* 14-3-3 binding proteins involved in cytoskeletal regulation and cellular organization. Curr. Biol. 14: 1436-1450.
4. de Atauri, P., et al. 2005. Characterization of the first described mutation of human red blood cell phosphoglycerate mutase. Biochim. Biophys. Acta 1740: 403-410.
5. Saavedra, E., et al. 2005. Glycolysis in *Entamoeba histolytica*. Biochemical characterization of recombinant glycolytic enzymes and flux control analysis. FEBS J. 272: 1767-1783
6. Lo, S.C. and Hannink, M. 2006. PGAM5, a Bcl-XL-interacting protein, is a novel substrate for the redox-regulated Keap1-dependent ubiquitin ligase complex. J. Biol. Chem. 281: 37893-37903.


## CHROMOSOMAL LOCATION

Genetic locus: PGAM5 (human) mapping to 12q24.33; Pgam5 (mouse) mapping to 5 F.

## SOURCE

PGAM5 (E-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of PGAM5 of human origin.

## PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-161155 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## APPLICATIONS

PGAM5 (E-13) is recommended for detection of PGAM5 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000); non cross-reactive with other PGAM family members

PGAM5 (E-13) is also recommended for detection of PGAM5 in additional species, including equine, canine, bovine and avian.

Suitable for use as control antibody for PGAM5 siRNA (h): sc-96246, PGAM5 siRNA (m): sc-152184, PGAM5 shRNA Plasmid (h): sc-96246-SH, PGAM5 shRNA Plasmid (m): sc-152184-SH, PGAM5 shRNA (h) Lentiviral Particles: sc-96246-V and PGAM5 shRNA (m) Lentiviral Particles: sc-152184-V.

Molecular Weight of PGAM5: 32 kDa.

Positive Controls: MCF7 whole cell lysate: sc-2206 or Jurkat whole cell lysate: sc-2204.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## RESEARCH USE

For research use only, not for use in diagnostic procedures.

## PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.