

Glucose-6-phosphate isomerase Recombinant Protein | GPI recombinant protein

Recombinant Human Glucose-6-phosphate isomerase

CATALOG # AAA15945	HOST E Coli
------------------------------	-----------------------

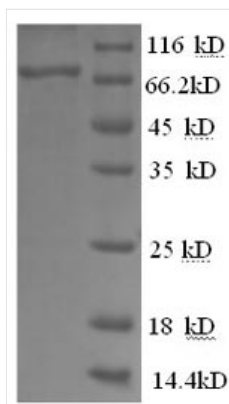
PRODUCT SYNONYMS

Glucose-6-phosphate isomerase; Recombinant Human Glucose-6-phosphate isomerase; Autocrine motility factor; AMF; Neuroleukin; NLK; Phosphoglucose isomerase; PGI; Phosphohexose isomerase; PHI; Sperm antigen 36; SA-36; GPI recombinant protein

PRODUCT SPECIFICATIONS

Host	E Coli
Purity/Purification	Greater or equal to 85% purity as determined by SDS-PAGE.
Form/Format	Liquid containing glycerol
Sequence Positions	2-554aa; Partial
Sequence	AALTRDPQFQ KLQQWYREHR SELNLRRLFD ANKDRFNHFS LTLNTNHGHI LVDYSKNLVT EDVMRMLVDL AKSRGVEAAR ERMFNGEKIN YTEGRAVLHV ALNRNSNTPI LVDGKDVMP E VNKVLDMKS FCQVRVSGDW KGYTGKTITD VINIGIGGSD LGPLMVTEAL KPYSSGGPRV WYVSNIDGTH IAKTLAQLNP ESSLFIASK TFFTQETITN AETAKEWFLQ AAKDPSAVAK HFVALSTNTT KVKEFGIDPQ NMFEFWDWVG GRYSLSWAIG LSIALHVGFD NFEQLLSGAH WMDQHFRTPP LEKNAPVLLA LLGIWYINCF GCETHAMLPY DQYLHRFAAY FQQGDMESNG KYITKSGTRV DHQTGPVWVG EPGTNGQHAF YQLIHQGTKM IPCDFLIPVQ TQHPIRKGLH HKILLANFLA QTEALMRGKS TEEARKELQA AGKSPEDLER LLPHKVFEGN RPTNSIVFTK LTPFMLGALV AMYEHKIFVQ GIIWDINSFD QWGVELGKQL AKKIEPELDG SAQVTSHDAS TNGLINFIKQ QRE
Preparation and Storage	Store at -20 degree C, for extended storage, conserve at -20 degree C or -80 degree C.

IMAGES



SDS-PAGE

ADDITIONAL INFORMATION

Related Product Information for GPI recombinant protein	Besides it's role as a glycolytic enzyme, mammalian GPI can function as a tumor-secreted cytokine and an angiogenic factor (AMF) that stimulates endothelial cell motility. GPI is also a neurotrophic factor (Neuroleukin) for spinal and sensory neurons.
Product Categories/Family for GPI recombinant protein	Signal Transduction

References

Gurney M.E. Cloning of a glucose phosphate isomerase/neuroleukin-like sperm antigen involved in sperm agglutination. *Yakirevich E., Naot Y. Biol. Reprod.* 62:1016-1023(2000) NIEHS SNPs program Complete sequencing and characterization of 21,243 full-length human cDNAs. Ota T., Suzuki Y., Nishikawa T., Otsuki T., Sugiyama T., Irie R., Wakamatsu A., Hayashi K., Sato H., Nagai K., Kimura K., Makita H., Sekine M., Obayashi M., Nishi T., Shibahara T., Tanaka T., Ishii S., Yamamoto J., Saito K., Kawai Y., Isono Y., Nakamura Y., Nagahari K., Murakami K., Yasuda T., Iwayanagi T., Wagatsuma M., Shiratori A., Sudo H., Hosoiri T., Kaku Y., Kodaira H., Kondo H., Sugawara M., Takahashi M., Kanda K., Yokoi T., Furuya T., Kikkawa E., Omura Y., Abe K., Kamihara K., Katsuta N., Sato K., Tanikawa M., Yamazaki M., Ninomiya K., Ishibashi T., Yamashita H., Murakawa K., Fujimori K., Tanai H., Kimata M., Watanabe M., Hiraoka S., Chiba Y., Ishida S., Ono Y., Takiguchi S., Watanabe S., Yosida M., Hotuta T., Kusano J., Kanehori K., Takahashi-Fujii A., Hara H., Tanase T.-O., Nomura Y., Togiya S., Komai F., Hara R., Takeuchi K., Arita M., Imose N., Musashino K., Yuuki H., Oshima A., Sasaki N., Aotsuka S., Yoshikawa Y., Matsunawa H., Ichihara T., Shiohata N., Sano S., Moriya S., Momiyama H., Satoh N., Takami S., Terashima Y., Suzuki O., Nakagawa S., Senoh A., Mizoguchi H., Goto Y., Shimizu F., Wakebe H., Hishigaki H., Watanabe T., Sugiyama A., Takemoto M., Kawakami B., Yamazaki M., Watanabe K., Kumagai A., Itakura S., Fukuzumi Y., Fujimori Y., Komiyama M., Tashiro H., Tanigami A., Fujiwara T., Ono T., Yamada K., Fujii Y., Ozaki K., Hirao M., Ohmori Y., Kawabata A., Hikiji T., Kobatake N., Inagaki H., Ikema Y., Okamoto S., Okitani R., Kawakami T., Noguchi S., Itoh T., Shigeta K., Senba T., Matsumura K., Nakajima Y., Mizuno T., Morinaga M., Sasaki M., Togashi T., Oyama M., Hata H., Watanabe M., Komatsu T., Mizushima-Sugano J., Satoh T., Shirai Y., Takahashi Y., Nakagawa K., Okumura K., Nagase T., Nomura N., Kikuchi H., Masuho Y., Yamashita R., Nakai K., Yada T., Nakamura Y., Ohara O., Isogai T., Sugano S. *Nat. Genet.* 36:40-45(2004) The DNA sequence and biology of human chromosome 19. Grimwood J., Gordon L.A., Olsen A.S., Terry A., Schmutz J., Lamerdin J.E., Hellsten U., Goodstein D., Couronne O., Tran-Gyamfi M., Aerts A., Altherr M., Ashworth L., Bajorek E., Black S., Branscomb E., Caenepeel S., Carrano A.V., Caoile C., Chan Y.M., Christensen M., Cleland C.A., Copeland A., Dalin E., Dehal P., Denys M., Detter J.C., Escobar J., Flowers D., Fotopulos D., Garcia C., Georgescu A.M., Glavina T., Gomez M., Gonzales E., Groza M., Hammon N., Hawkins T., Haydu L., Ho I., Huang W., Israni S., Jett J., Kadner K., Kimball H., Kobayashi A., Larionov V., Leem S.-H., Lopez F., Lou Y., Lowry S., Malfatti S., Martinez D., McCready P.M., Medina C., Morgan J., Nelson K., Nolan M., Ovcharenko I., Pitluck S., Pollard M., Popkie A.P., Predki P., Quan G., Ramirez L., Rash S., Retterer J., Rodriguez A., Rogers S., Salamov A., Salazar A., She X., Smith D., Slezak T., Solovyev V., Thayer N., Tice H., Tsai M., Ustaszewska A., Vo N., Wagner M., Wheeler J., Wu K., Xie G., Yang J., Dubchak I., Furey T.S., DeJong P., Dickson M., Gordon D., Eichler E.E., Pennacchio L.A., Richardson P., Stubbs L., Rokhsar D.S., Myers R.M., Rubin E.M., Lucas S.M. *Nature* 428:529-535(2004) Characterization of the 5' end of the gene for human glucose phosphate isomerase (GPI). Walker J.I.H., Faik P., Morgan M.J. *Genomics* 7:638-643(1990) Bienvenut W.V. Submitted (OCT-2004) to UniProtKB Mouse glucose-6-phosphate isomerase and neuroleukin have identical 3' sequences. Faik P., Walker J.I.H., Redmill A.A.M., Morgan M.J. *Nature* 332:455-456(1988) Phosphohexose isomerase/autocrine motility factor/neuroleukin/maturation factor is a multifunctional phosphoprotein. Haga A., Niinaka Y., Raz A. *Biochim. Biophys. Acta* 1480:235-244(2000) Tumor autocrine motility factor is an angiogenic factor that stimulates endothelial cell motility. Funasaka T., Haga A., Raz A., Nagase H. *Biochem. Biophys. Res. Commun.* 285:118-128(2001) Species specificity of the cytokine function of phosphoglucose isomerase. Amraei M., Nabi I.R. *FEBS Lett.* 525:151-155(2002) Proteomic identification of proteins conjugated to ISG15 in mouse and human cells. Giannakopoulos N.V., Luo J.K., Papov V., Zou W., Lenschow D.J., Jacobs B.S., Borden E.C., Li J., Virgin H.W., Zhang D.E. *Biochem. Biophys. Res. Commun.* 336:496-506(2005) Differential regulation of phosphoglucose isomerase/autocrine motility factor activities by protein kinase CK2 phosphorylation. Yanagawa T., Funasaka T., Tsutsumi S., Raz T., Tanaka N., Raz A.J. *Biol. Chem.* 280:10419-10426(2005) A quantitative atlas of mitotic phosphorylation. Dephoure N., Zhou C., Villen J., Beausoleil S.A., Bakalarski C.E., Elledge S.J., Gygi S.P. *Proc. Natl. Acad. Sci. U.S.A.* 105:10762-10767(2008) Lys-N and trypsin cover complementary parts of the phosphoproteome in a refined SCX-based approach. Gauci S., Helbig A.O., Slijper M., Krijgsveld J., Heck A.J., Mohammed S. *Anal. Chem.* 81:4493-4501(2009) Quantitative phosphoproteomic analysis of T cell receptor signaling reveals system-wide modulation of protein-protein interactions. Mayya V., Lundgren D.H., Hwang S.-I., Rezaul K., Wu L., Eng J.K., Rodionov V., Han D.K. *Sci. Signal.* 2:RA46-RA46(2009) Lysine acetylation targets protein complexes and co-regulates major cellular functions. Choudhary C., Kumar C., Gnad F., Nielsen M.L., Rehman M., Walther T.C., Olsen J.V., Mann M. *Science* 325:834-840(2009) Initial characterization of the human central proteome. Burkard T.R., Planyavsky M., Kaupe I., Breitwieser F.P., Buerckstuemmer T., Bennett K.L., Superti-Furga G., Colinge J. *BMC Syst. Biol.* 5:17-17(2011) The first identification of lysine malonylation substrates and its regulatory enzyme. Peng C., Lu Z., Xie Z., Cheng Z., Chen Y., Tan M., Luo H., Zhang Y., He W., Yang K., Zwaans B.M., Tishkoff D., Ho L., Lombard D., He T.C., Dai J., Verdin E., Ye Y., Zhao Y. *Mol. Cell. Proteomics* 10:M111.012658.01-M111.012658.12(2011) An enzyme assisted RP-RPLC approach for in-depth analysis of human liver phosphoproteome. Bian Y., Song C., Cheng K., Dong M., Wang F., Huang J., Sun D., Wang L., Ye M., Zou H.J. *Proteomics* 96:253-262(2014) The crystal structure of human phosphoglucose isomerase at 1.6 Å resolution implications for catalytic mechanism, cytokine activity and haemolytic anaemia. Read J., Pearce J., Li X., Muirhead H., Chirgwin J., Davies C.J. *Mol. Biol.* 309:447-463(2001) Inhibition mechanism of cytokine activity of human autocrine motility factor examined by crystal structure analyses and site-directed mutagenesis studies. Tanaka N., Haga A., Uemura H., Akiyama H., Funasaka T., Nagase H., Raz A., Nakamura K.T.J. *Mol. Biol.* 318:985-997(2002) The structure of human phosphoglucose isomerase complexed with a transition-state analogue. Davies C., Muirhead H., Chirgwin J. *Acta Crystallogr. D* 59:1111-1113(2003) Crystal structure of human phosphoglucose isomerase and analysis of the initial catalytic steps. Cordeiro A.T., Godoi P.H., Silva C.H., Garratt R.C., Oliva G., Thiemann O.H. *Biochim. Biophys. Acta* 1645:117-122(2003) DNA sequence abnormalities in human glucose 6-phosphate isomerase deficiency. Walker J.I.H., Layton D.M., Bellingham A.J., Morgan M.J., Faik P. *Hum. Mol. Genet.* 2:327-329(1993) The characterization of gene mutations for human glucose phosphate isomerase deficiency associated with chronic hemolytic anemia. Xu W., Beutler E.J. *Clin. Invest.*

NCBI AND UNIPROT INFORMATION

NCBI GI #	18201905
NCBI GeneID	2821
NCBI Accession #	NP_000166.2
NCBI GenBank Nucleotide #	NM_000175.3
UniProt Accession #	P06744; Q9BRD3; Q9BSK5; Q9UHE6; B4DG39
Molecular Weight	66.6 kDa
NCBI Official Full Name	glucose-6-phosphate isomerase isoform 2
NCBI Official Synonym Full Names	glucose-6-phosphate isomerase
NCBI Official Symbol	GPI
NCBI Official Synonym Symbols	AMF; NLK; PGI; PHI; GNPI; SA36; SA-36
NCBI Protein Information	glucose-6-phosphate isomerase
UniProt Protein Name	Glucose-6-phosphate isomerase
UniProt Gene Name	GPI
UniProt Synonym Gene Names	GPI; AMF; NLK; PGI; PHI; SA-36
UniProt Entry Name	G6PI_HUMAN

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

AAA Biotech | Tel: +1 (619) 604-9440 | Fax: +1 (619) 604-9441 | contact@aaabiotech.com
Online datasheet: <https://stage.aaabiotech.com/gpi-recombinant-protein-e-coli/15945>