

PGD Protein, Human (HEK293, His)

Cat. No.:	HY-P7450
Synonyms:	rHuPGD, His; 6-phosphogluconate dehydrogenase, decarboxylating; PGD
Species:	Human
Source:	HEK293
Accession:	P52209 (M1-A483)
Gene ID:	5226
Molecular Weight:	Approximately 58.0 kDa

PROPERTIES

AA Sequence

MAQADIALIG	LAVMGQNLIL	NMNDHGFVVC	AFNRTVSKVD
DFLANEAKGT	KVVGQAQSLKE	MVSKLKKPRR	IILLVKAGQA
VDDFIEKLV P	LLDTGDIID	GGNSEYRDTT	RRCRDLKAKG
ILFVGSVSG	GEEGARYGPS	LMPGGNKEAW	PHIKTIFQGI
AAKVG TGEPC	CDWVGDEGAG	HFVKMVHNGI	EYGDMLICE
AYHLMKDV LG	MAQDEMAQAF	EDWNKTE LDS	FLIEITANIL
KFQDTDGKHL	LPKIRDSAGQ	KGTGKWTAIS	ALEYGVPVTL
IGEAVFARCL	SSLKDERIQA	SKKLKGPQKF	QFDGDKKSFL
EDIRKALYAS	KIISYAQGF M	LLRQAATEFG	WTLNYGGIAL
MWRGGC IIRS	VFLGKIKDAF	DRNPELQNLL	LDDFFKSAVE
NCQDSWRR AV	STGVQAGIPM	PCFTTALS FY	DGYRHEMLPA
SLIQAQRDYF	GAHTYELLAK	PGQFIHTNWT	GHGGTVSSSS
YNAHHHHHH			

Appearance Solution

Formulation Supplied as a 0.2 µm filter solution of 20 mM PB, 150 mM NaCl, pH 7.4.

Endotoxin Level <1 EU/µg, determined by LAL method.

Reconstitution N/A

Storage & Stability Stored at -80°C for 1 year. It is stable at -20°C for 3 months after opening. It is recommended to freeze aliquots at -80°C for extended storage. Avoid repeated freeze-thaw cycles.

Shipping Shipping with dry ice

DESCRIPTION

Background

PGD is commonly upregulated and plays important roles in many human cancers, while the mechanism underlying such roles of PGD remains elusive. This phosphorylation enhances 6PGD activity by increasing its binding affinity to NADP⁺ and therefore activates the PPP for NADPH and ribose-5-phosphate, which consequently detoxifies intracellular reactive oxygen species (ROS) and accelerates DNA synthesis. In addition, 6PGD pY481 is associated with Fyn expression, the malignancy and prognosis of human glioblastoma. These findings establish a critical role of Fyn-dependent 6PGD phosphorylation in EGF-promoted tumor growth and radiation resistance^[1].

REFERENCES

[1]. Ruilong Liu, et al. Tyrosine Phosphorylation Activates 6-phosphogluconate Dehydrogenase and Promotes Tumor Growth and Radiation Resistance. Nat Commun. 2019 Mar 1;10(1):991.

Caution: Product has not been fully validated for medical applications. For research use only.

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