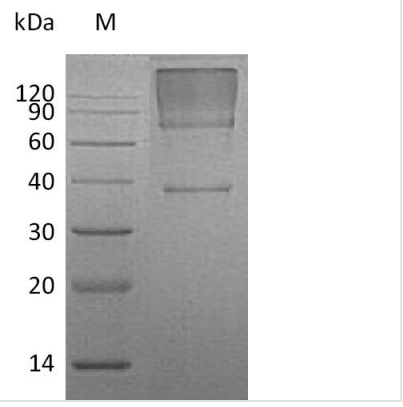
Recombinant Human Glypican-3 (GPC3), partial (Active)

Product Code	CSB-AP005371HU
Abbreviation	Recombinant Human GPC3 protein, partial (Active)
Uniprot No.	P51654
Storage Buffer	Lyophilized from a 0.2 μm filtered 1xPBS, pH 7.4
Product Type	Others
Immunogen Species	Homo sapiens (Human)
Biological Activity	Measured by its binding ability in a functional ELISA. Immobilized Human FGFb (146AA) at 2 μg/ml can bind Human GPC3 (C-6His), the EC50 of Human GPC3 (C-6His) is not higher than 50 ng/ml.
Purity	Greater than 95% as determined by SDS-PAGE.
Sequence	QPPPPPPDATCHQVRSFFQRLQPGLKWVPETPVPGSDLQVCLPKGPTCCSR KMEEKYQLTARLNMEQLLQSASMELKFLIIQNAAVFQEAFEIVVRHAKNYTNAM FKNNYPSLTPQAFEFVGEFFTDVSLYILGSDINVDDMVNELFDSLFPVIYTQLM NPGLPDSALDINECLRGARRDLKVFGNFPKLIMTQVSKSLQVTRIFLQALNLGIE VINTTDHLKFSKDCGRMLTRMWYCSYCQGLMMVKPCGGYCNVVMQGCMAG VVEIDKYWREYILSLEELVNGMYRIYDMENVLLGLFSTIHDSIQYVQKNAGKLTT TIGKLCAHSQQRQYRSAYYPEDLFIDKKVLKVAHVEHEETLSSRRRELIQKLKS FISFYSALPGYICSHSPVAENDTLCWNGQELVERYSQKAARNGMKNQFNLHEL KMKGPEPVVSQIIDKLKHINQLLRTMSMPKGRVLDKNLDEEGFESGDCGDDED ECIGGSGDGMIKVKNQLRFLAELAYDLDVDDAPGNSQQATPKDNEISTFHNLG NVH
Research Area	Cancer
Source	Mammalian cell
Target Names	GPC3
Expression Region	25-559aa
Tag Info	C-terminal 6xHis-tagged
Mol. Weight	61.6 kDa
Protein Length	Partial
Image	



(Tris-Glycine gel) Discontinuous SDS-PAGE (reduced) with 5% enrichment gel and 15% separation gel.

Description

GPC3, part of the glypican family, is a large protein found on cell surfaces, weighing in at 66,000 kDa [1]. It plays a crucial role in regulating cell growth and death during development by interacting with other surface proteins and influencing the activity of growth factors [2].

Composed of a core protein weighing 70 kDa and two highly charged heparan sulfate side chains, GPC3 acts like a magnet, pulling in important signaling molecules from the surrounding tumor environment and helping cells recognize and respond to them [3]. In human liver cancer (hepatocellular carcinoma or HCC), GPC3 is particularly abundant, making it a promising diagnostic marker [4]. Its impact on cell behavior and tumor formation varies depending on the tissue involved [5].

In HCC, GPC3 fuels tumor growth by revving up the canonical Wnt pathway and tweaking other signaling routes like YAP and hedgehog [6][7]. It's a familiar face in liver and skin cancers, being notably high in melanoma [8]. Plus, during normal growth, it pitches in by controlling cell numbers through regulating cell birth and death [9].

Yet, despite its prominence, we're still scratching our heads over GPC3's exact role in cancer [10][11][12][13]. More digging is needed to uncover how and why GPC3 goes into overdrive in cancers like liver, skin, and thyroid [14][15]. Its link to changes in cell behavior, like the switch from stationary to mobile in liver cancer, is also ripe for exploration [16]. And it's not just liver and skin - GPC3 also seems to give a boost to cervical cancer cells [17].

References:
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Endotoxin	Less than 1.0 EU/μg as determined by LAL method.
Shelf Life	The shelf life is related to many factors, storage state, buffer ingredients, storage temperature and the stability of the protein itself. Generally, the shelf life of liquid form is 6 months at -20°C/-80°C. The shelf life of lyophilized form is 12 months at -20°C/-80°C.