

PODXL Protein, Human (P.pastoris, His)

Cat. No.:	HY-P71814
Synonyms:	GCTM-2 antigen; Gp2; Gp200; PCLP1; Pcx; Podocalyxin; Podocalyxin like; Podocalyxin like protein; Podocalyxin-like protein 1; Podxl
Species:	Human
Source:	P. pastoris
Accession:	O00592 (32Q-458F)
Gene ID:	5420
Molecular Weight:	Approximately 120 kDa

PROPERTIES

AA Sequence

Q N A T Q T T T D S	S N K T A P T P A S	S V T I M A T D T A	Q Q S T V P T S K A
N E I L A S V K A T	T L G V S S D S P G	T T T L A Q Q V S G	P V N T T V A R G G
G S G N P T T T I E	S P K S T K S A D T	T T V A T S T A T A	K P N T T S S Q N G
A E D T T N S G G K	S S H S V T T D L T	S T K A E H L T T P	H P T S P L S P R Q
P T S T H P V A T P	T S S G H D H L M K	I S S S S S T V A I	P G Y T F T S P G M
T T T L L E T V F H	H V S Q A G L E L L	T S G D L P T L A S	Q S A G I T A S S V
I S Q R T Q Q T S S	Q M P A S S T A P S	S Q E T V Q P T S P	A T A L R T P T L P
E T M S S S P T A A	S T T H R Y P K T P	S P T V A H E S N W	A K C E D L E T Q T
Q S E K Q L V L N L	T G N T L C A G G A	S D E K L I S L I C	R A V K A T F N P A
Q D K C G I R L A S	V P G S Q T V V V K	E I T I H T K L P A	K D V Y E R L K D K
W D E L K E A G V S	D M K L G D Q G P P	E E A E D R F	

Appearance Lyophilized powder

Formulation Lyophilized after extensive dialysis against solution in 20 mM Tris-HCl, 0.15 M NaCl, 6% Trehalose, pH 8.0.

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

Reconstitution It is not recommended to reconstitute to a concentration less than 100 μg/mL in ddH₂O.

Storage & Stability Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.

Shipping Room temperature in continental US; may vary elsewhere.

DESCRIPTION

Background

The PODXL Protein plays a multifaceted role in the regulation of adhesion, cell morphology, and cancer progression. Functioning as an anti-adhesive molecule, PODXL maintains an open filtration pathway between neighboring foot processes

in the podocyte through charge repulsion. Simultaneously, it acts as a pro-adhesive molecule, enhancing cell adherence to immobilized ligands, promoting migration, and facilitating cell-cell contacts in an integrin-dependent manner. PODXL induces the formation of apical actin-dependent microvilli and is crucial for the establishment of initial epithelial polarization and apical lumen formation during renal tubulogenesis. In cancer, PODXL contributes to cell migration and invasion by interacting with the actin-binding protein EZR, affecting EZR-dependent signaling events that lead to increased activities of the MAPK and PI3K pathways. Its oligomeric state varies, existing as a monomer when associated with membrane rafts and forming oligomers when integrated into the apical membrane. PODXL's interactions with NHERF1, NHERF2, and EZR highlight its dynamic role in cellular processes and its importance in diverse cellular contexts.

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

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