

RDsystems

DESCRIPTION				
Source	Human embryonic kidney cell, HEK293-derived human P-Cadherin protein			
	Human PCAD (Asp108-Gly654) Accession # CAA45177.1	IEGRMDGG	Human IgG ₁ (Pro100-Lys330)	Avi-tag
	N-terminus C-term			
N-terminal Sequence Analysis	Asp108			
Structure / Form	Disulfide linked homodimer Biotinylated via Avi-tag			
Predicted Molecular Mass	88 kDa			

SPECIFICATIONS		
SDS-PAGE	103-130 kDa, under reducing conditions.	
Activity	Measured by its binding ability in a functional ELISA. Biotinylated Recombinant Human P-Cadherin Fc Chimera Avi-tag (Catalog # AVI11651) binds Recombinant Human CDCP1 Fc Chimera (Catalog # 10402-CU) with an ED ₅₀ of 0.500-7.00 μg/mL.	
Endotoxin Level	<0.10 EU per 1 µg of the protein by the LAL method.	
Purity	>90%, by SDS-PAGE visualized with Silver Staining and quantitative densitometry by Coomassie® Blue Staining.	
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details.	

PREPARATION AND STORAGE			
Reconstitution	Reconstitute at 200 µg/mL in water.		
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.		
Stability & Storage	 Use a manual defrost freezer and avoid repeated freeze-thaw cycles. 12 months from date of receipt, -20 to -70 °C as supplied. 1 month, 2 to 8 °C under sterile conditions after reconstitution. 		

• 3 months, -20 to -70 °C under sterile conditions after reconstitution.



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bio-techne® RDSYSTEMS

BACKGROUND

Placental (P) - Cadherin (PCAD) is a member of the Cadherin family of cell adhesion molecules. Cadherins are calcium-dependent transmembrane proteins, which bind to one another in a homophilic manner. On their cytoplasmic side, they associate with the three catenins, α , β , and γ (plakoglobin). This association links the cadherin protein to the cytoskeleton. Without association with the catenins, the cadherins are non-adhesive. Cadherins play a role in development, specifically in tissue formation. They may also help to maintain tissue architecture in the adult. P-Cadherin is a classical cadherin molecule. Classical cadherins consist of a large extracellular domain which contains DXD and DXNDN repeats responsible for mediating calcium-dependent adhesion, a single-pass transmembrane domain, and a short carboxy-terminal cytoplasmic domain responsible for interacting with the catenins. Human P-Cadherin is an 829 amino acid (aa) protein with a 26 aa signal sequence and an 803 aa propeptide. The mature protein begins at aa 108 and has a 548 aa extracellular region, a 23 aa transmembrane region, and a 151 aa cytoplasmic region. The human and mouse mature PCAD proteins share 87% homology. Our Avi-tag Biotinylated human P-Cadherin Fc Chimera features biotinylation at a single site contained within the Avi-tag, a unique 15 amino acid peptide. Protein orientation will be uniform when bound to streptavidin-coated surface due to the precise control of biotinylation and the rest of the protein is unchanged so there is no interference in the protein's bioactivity.

References:

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- 4. Takeichi, M. (1991) Science **251**:1451.
- 5. Nose, A. et al. (1987) EMBO J. 6:3655.