

DESCRIPTION

Source	Mouse myeloma cell line, NS0-derived			
	Human P-Cadherin (Asp108 - Gly654) Accession # CAA45177	IEGRMD	Human IgG ₁ (Pro100 - Lys330)	6-His tag
	N-terminus		C-terminus	

N-terminal Sequence Asp108

Analysis

Structure / Form Disulfide-linked homodimer

Predicted Molecular Mass 87.4 kDa

SPECIFICATIONS

SDS-PAGE	120-130 kDa, under reducing conditions
Activity	Measured by the ability of the immobilized protein to support the adhesion of A431 human epithelial carcinoma cells. When 1 x 10 ⁵ cells/well are added to rhP-CAD/Fc Chimera coated plates (10 µg/mL with 100 µL/well), approximately 30-60% will adhere after 1.5 hours at 37° C. Optimal concentration depends on cell type as well as the application or research objectives.
Endotoxin Level	<0.01 EU per 1 µg of the protein by the LAL method.
Purity	>90%, by SDS-PAGE under reducing conditions and visualized by silver stain.
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS. See Certificate of Analysis for details.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 100 µg/mL in sterile PBS.
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. <ul style="list-style-type: none"> ● 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.

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.

References:

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3. Overduin, M. *et al.* (1995) Science **267**:386.
4. Takeichi, M. (1991) Science **251**:1451.
5. Nose, A. *et al.* (1987) EMBO J. **6**:3655.