Data Sheet (Cat.No.TMPY-01052)

TargetMol

R-Cadherin/CDH4 Protein, Human, Recombinant (His)

General Information

Synonyms:	R-CAD;cadherin 4, type 1, R-cadherin (retinal);RCAD;CAD4
Protein Construction:	A DNA sequence encoding the extracellular domain of human CAD4 (NP_001785.2) (Met 1-Ala 734) was expressed with a fused polyhistidine tag at the C-terminus. Predicted N terminal: His 21
Species:	Human
Expression Host:	HEK293 Cells
Accession:	P55283-1
Molecular Weight:	80 kDa (predicted); 90-100 kDa (reducing condition, due to glycosylation)

QC Testing

Biological Activity:	Activity testing is in progress. It is theoretically active, but we cannot guarantee it. If you require protein activity, we recommend choosing the eukaryotic expression version first.
Purity:	> 85 % as determined by SDS-PAGE
Endotoxin:	< 1.0 EU/μg of the protein as determined by the LAL method.
Formulation:	Lyophilized from a solution filtered through a 0.22 μm filter, containing 50 mM Tris, 100 mM NaCl, pH 8.0.Typically, a mixture containing 5% to 8% trehalose, mannitol, and 0.01% Tween 80 is incorporated as a protective agent before lyophilization.

Preparation and Storage

Reconstitution:

A Certificate of Analysis (CoA) containing reconstitution instructions is included with the products. Please refer to the CoA for detailed information.

Stability & Storage:

It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

Protein Background

The cadherin superfamily is a large family that engage in both homo- and heterotypic, calcium-dependent, cell-cell adhesion events, and can be divided into at least four subfamilies based on the extracellular (EC) regions and cytoplasmic domains, that is: classical cadherins, desmosomal cadherins, protocadherins, and cadherin-like molecules. Human cadherin 4, type 1, R-cadherin (retinal), also known as CDH4, CAD4 and RCAD, is a classical

cadherin from the cadherin superfamily. It is a calcium-dependent adhesion molecule and a type I transmembrane glycoprotein composed of five extracellular cadherin repeats, a transmembrane region and a highly conserved cytoplasmic tail. CDH4 is thought to play an important role during brain segmentation and neuronal outgrowth, and also exerts critical actions in kidney and muscle development. CDH4 is expressed in vascular smooth muscle, pancreatic β-cells, thyroid follicular cells, sensory neurons of the dorsal root ganglia, and, possibly, astrocytes and endothelium of the retina. As a classic cadherin, CDH4 forms both homodimers and heterodimers with N-cadherin. The extracellular region of human CDH4 is 96% aa identical to that of mouse CDH4.

Reference

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