

## CDH18, Human, Recombinant, 0.1 mg

Catalog Number 5090

### DDESCRIPTION

Human CDH18 gene encodes a type II classical cadherin from the cadherin superfamily of integral membrane proteins that mediate calcium-dependent cell-cell adhesion. Mature cadherin proteins are composed of a large N-terminal extracellular domain, a single membrane-spanning domain, and a small, highly conserved C-terminal cytoplasmic domain. Type II (atypical) cadherins are defined based on their lack of a HAV cell adhesion recognition sequence specific to type I cadherins. Human CDH18 is expressed specifically in the central nervous system and is putatively involved in synaptic adhesion, axon outgrowth and guidance.

Full-length extracellular domain of human CDH18 gene (54-608 aa) was constructed with 29 N-terminal T7/His tag and expressed in *E. coli* as inclusion bodies. The final product was refolded using our unique “temperature shift inclusion body refolding” technology and chromatographically purified.

### Characteristics

Parameter, Testing, and Method	CDH18, Human, Recombinant Catalog # 5090
Quantity	0.1 mg (100 µg/vial)
Volume	0.2 mL
Concentration	0.5 mg/mL
Purity	≥90% as measured by SDS PAGE
Formulation	Formulated in 20 mM pH 8.0 Tris-HCl Buffer, with proprietary formulation of NaCl, KCl, EDTA, L-Arginine, DTT and Glycerol.
Form	Solution
Production Type	Recombinant – <i>E. coli</i>
Storage Temperature	Keep at -20 °C for long term storage. Product is stable at 4°C for at least 30 days.
Shelf Life	12 months after receipt
Sterilization Method	Filtration
Cell Attachment Activity	Passes
Sterility	No growth
Accession No.	NP_004925
Recombinant	MASMTGGQQMGRGHHHHHGNLYFQGGFEGWV

Sequence	
	WNQFFVLEEEMGPDQPQYVVKLHNSNDKGDGSV KYILTGEGAGTIFIIDDTTGDHSTKSLDREQ KTHYVLHAQAIDRRTNKPLEPESEFIKVVQDI NDNAPKFTDGPYIVTVPEMSDMGTSVLQVTAT DADDDPTYGNSARVVYSILQGQPYFSVDPKGTG IRTAHNMMDREAREHYSVVIQAKDMAGQVGG SGSTTVNITLTDVNDNPPRFQPKHYQLYVPES AQVGSVAVGKIKANDADTGSNADMTYSIINGDG MGIFSISTDKETREGILSLKKPLNYEKKSYS LNIEGANTHLDFRFSHLGFPKDATMLKIVGD VDEPLFSMPSYLMEVYENAKIGTVVGTVLAQ DPDSTNSLVRYFINYNVEDDRFFNIDANTGTI RTTKVLDREETPWYNITVTASEIDNPDLLSHV TVGIRVLDVNDNPELAREYDIIVCENSKPGQ VIHTISATDKDDFANGPRFNFFLDERLPVNP FTLKDNEEDNTASILTRRRRFSRTVQDVYYLPI MISDGGIPSLSSSSTLTIRVCACERDGRVRTC HAEAFLLS

### APPLICATIONS

This product is for R&D use only and is not intended for human or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

### INSTRUCTIONS FOR USE

Use these recommendations as guidelines to determine the optimal coating conditions for your culture system.

1. Thaw CDH18 and dilute to desired concentration using serum-free medium or PBS. The final solution should be sufficiently dilute so that the volume added covers the surface evenly.
2. Add appropriate amount of diluted material to culture surface.
3. Incubate at room temperature for approximately 1 – 2 hours.
4. Aspirate remaining material.
5. Rinse plates carefully with dH<sub>2</sub>O– avoid scratching bottom surface of plates.
6. Plates are ready for use. They may also be stored at 2-8°C damp or air dried if sterility is maintained.

Note: Coating this recombinant protein at 1-10 µg / well (6 well plate) in neuronal cell specific medium can be used for 1) human neuronal cell / receptor interaction study and 2) may be used as culture matrix protein for human neuronal axon connection study *in vitro*.

### REFERENCES:

(1) Shibata, T., et al. Identification of human cadherin-14, a novel neurally specific type II cadherin, by protein interaction cloning. *J. Biol. Chem.* 272 (8), 5236-5240 (1997).

(2) Shimoyama, Y., et al. Identification of three human type-II classic cadherins and frequent heterophilic interactions between different subclasses of type-II classic cadherins. *Biochem. J.* 349 (PT 1), 159-167 (2000).