

## N-Cadherin Protein, Human (699a.a, HEK293, His)

Cat. No.:	HY-P73302
Synonyms:	Cadherin-2; CD325; CDH2; CDHN; CDw325; NCAD; N-cadherin 1
Species:	Human
Source:	HEK293
Accession:	P19022 (S26-A724)
Gene ID:	1000
Molecular Weight:	75-90 kDa

### PROPERTIES

Biological Activity	Measured by the ability of the immobilized protein to support the adhesion of MCF-7 human breast adenocarcinoma cells.
Appearance	Lyophilized powder
Formulation	Lyophilized from a 0.2 $\mu$ m filtered solution of PBS, pH 7.4. Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween 80 are added as protectants before lyophilization.
Endotoxin Level	<1 EU/ $\mu$ g, determined by LAL method.
Reconstitution	It is not recommended to reconstitute to a concentration less than 100 $\mu$ g/mL in ddH <sub>2</sub> O.
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

N-Cadherin Protein is a calcium-dependent cell adhesion protein that plays a crucial role in homotypic cell-cell adhesion by forming dimers with CDH2 chains from neighboring cells. This interaction between cadherins contributes to the sorting of different cell types. In the adult subependymal zone, N-Cadherin Protein regulates the quiescence of neural stem cells by anchoring them to ependymocytes. However, when cleaved by MMP24, this anchorage is disrupted, leading to the modulation of neural stem cell quiescence. N-Cadherin Protein also plays a role in the formation of cell-to-cell junctions between pancreatic beta cells and neural crest stem cells, promoting the extension of processes by the latter. Furthermore, it is essential for proper neurite branching and pre- and postsynaptic organization. N-Cadherin Protein may be involved in neuronal recognition mechanisms and the regulation of dendritic spine density in hippocampal neurons. It can form homodimers or heterodimers with other cadherins, and these interactions occur in trans, meaning with cadherin chains from neighboring cells. N-Cadherin Protein interacts with various proteins, including CDCP1, PCDH8, and OBSCN, and it has been found in a complex containing FGFR4, NCAM1, CDH2, PLCG1, FRS2, SRC, SHC1, GAP43, and CTTN. Additionally, it has been shown to interact with FBXO45.

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

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