

# Unphosphorylated N-Cadherin (Tyr-820)

Cat. # CP1851

Host Rabbit polyclonal

Size 100 µl

## Background:

Cadherins are transmembrane glycoproteins vital in calcium-dependent cell-cell adhesion during tissue differentiation. Cadherins cluster to form foci of homophilic binding units. A key determinant to the strength of the cadherin-mediated adhesion may be by the juxtamembrane region in cadherins. This region induces clustering and also binds to the protein p120 catenin. The cytoplasmic region is highly conserved in sequence and has been shown experimentally to regulate the cell-cell binding function of the extracellular domain of E-cadherin, possibly through interaction with the cytoskeleton. Many cadherins are regulated by phosphorylation, including N-cadherin and E-cadherin. N-cadherin is phosphorylated by c-Src at Tyr-820, Tyr-853, Tyr-860, Tyr-884, and Tyr-886. Phosphorylation of Tyr-860 can disrupt cadherin binding to  $\beta$ -catenin. Since many of these tyrosine sites are conserved in the cadherin family, phosphorylation of these sites may be critical for cadherin function.

## References

- Xu, Y. et al. (1997) J. Biol. Chem. 272(21):13463  
Xu, Y. & Carpenter, G. (1999) J. Cell. Biochem. 75:264.  
Qi, J. et al. (2006) Mol. Biol. Cell 17(3):1261.

## Immunogen:

Unphosphorylated N-Cadherin (Tyr-820) synthetic peptide (coupled to carrier protein) corresponding to amino acids surrounding tyrosine 820 in human N-cadherin. This sequence is conserved in rat and mouse N-cadherin, and has three amino acid differences from the conserved region in R-cadherin.

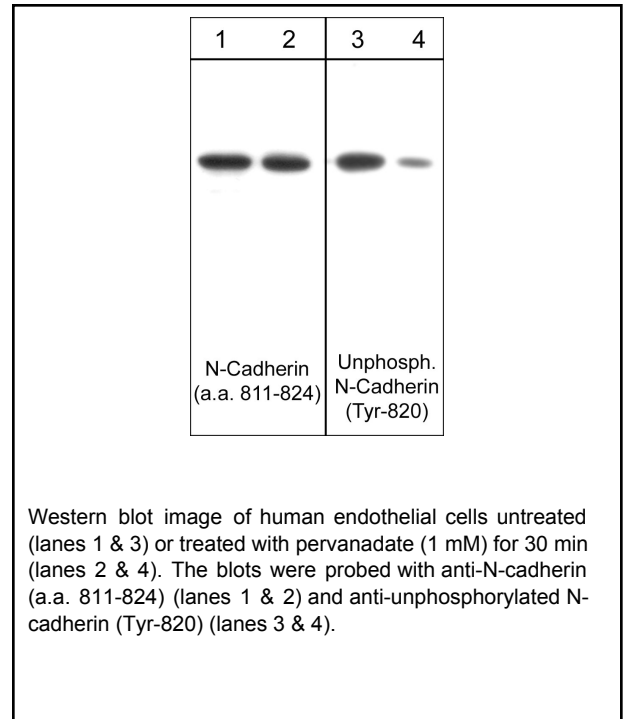
## Applications:

WB 1:1000  
ELISA 1:2000

End user should determine optimal dilution for their particular applications and experiments. Western blot membranes were incubated with diluted antibody in 5% non-fat milk, PBS, 0.04% Tween20 for 1 hour at room temperature.

## Related Products:

CP1901 N-Cadherin (a.a. 853-864)  
CP1751 N-Cadherin (a.a. 811-824)  
CM1701 N-Cadherin (Cytoplasmic)  
CP1951 N-Cadherin (Tyr-860), phospho-specific [Conserved site]  
CP1801 N-Cadherin (Tyr-820), phospho-specific  
CM1681 E-Cadherin (Cytoplasmic)



## Buffer and Storage:

Rabbit polyclonal, affinity-purified antibody is supplied in 100 µl phosphate-buffered saline, 50% glycerol, 1 mg/ml BSA, and 0.05% sodium azide. Store at -20°C. Do not aliquot. Stable for 1 year.

## Specificity:

This antibody was cross-adsorbed to phospho-N-cadherin (Tyr-820) peptide before affinity purification using unphosphorylated N-cadherin (Tyr-820) peptide. The purified antibody detects a strong band at 130 kDa\* in western blots of serum-starved human endothelial cells, but is decreased in pervanadate treated cells. This reactivity in western blots is blocked specifically by unphosphorylated N-cadherin (Tyr-820) peptide.

\*All molecular weights (MW) are confirmed by comparison to Bio-Rad Rainbow Markers and to western blot mobilities of known proteins with similar MW.

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www.ecmbiosciences.com  
telephone: 859-879-2075  
toll-free: 1-800-859-8202  
tech: info@ecmbiosciences.com

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