

## ORDERING INFORMATION

**Catalog Number:** MAB1388

**Clone:** 401408

**Lot Number:** CAPW01

**Size:** 100 µg

**Formulation:** 0.2 µm filtered solution in PBS with 5% trehalose

**Storage:** -20° C

**Reconstitution:** sterile PBS

**Specificity:** human N-Cadherin

**Immunogen:** *E. coli*-derived rhN-Cadherin

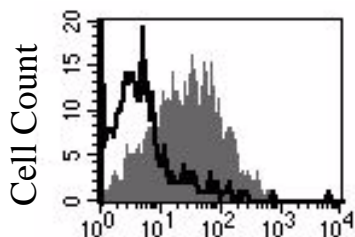
**Ig class:** rat IgG<sub>2A</sub>

**Recommended Applications:**

Western blot  
Flow cytometry

**Other Application:**

Direct ELISA



N-Cadherin

HEK293 human embryonic kidney cells were stained with anti-N-Cadherin (R&D Systems, Cat. # MAB1388, grey histogram) or isotype control (R&D Systems, Cat. # MAB006, open histogram) followed by APC-conjugated anti-rat IgG antibody (R&D Systems, Cat. # F0113).

## Background

Neuronal Cadherin (N-Cadherin or NCAD), also named Cadherin-2, is a ~120 kDa type I membrane protein belonging to the type I classic Cadherin subfamily. This Ca<sup>2+</sup>-dependent cell-to-cell adhesion molecule interacts with the actin cytoskeleton via binding of catenins to its cytoplasmic region. N-Cadherin expression is relatively ubiquitous during early vertebrate development and its adhesion activates neuronal signaling cascades. In adult tissues, N-Cadherin is highly expressed in neural tissues, skeletal and cardiac muscle. N-Cadherin adhesion is either homotypic or heterotypic with R-Cadherin.

## Preparation

This antibody was produced from a hybridoma resulting from the fusion of a mouse myeloma with B cells obtained from a rat immunized with purified, *E. coli*-derived, recombinant human N-Cadherin (rhN-Cadherin; aa 26 - 159; Accession # P19022). The IgG fraction of the tissue culture supernatant was purified by Protein G affinity chromatography.

## Formulation

Lyophilized from a 0.2 µm filtered solution in phosphate-buffered saline (PBS) with 5% trehalose.

## Reconstitution

Reconstitute with sterile PBS. If 0.2 mL of PBS is used, the antibody concentration will be 500 µg/mL.

## Storage

Lyophilized samples are stable for twelve months from date of receipt when stored at -20° C to -70° C. Upon reconstitution, the antibody can be stored at 2° - 8° C for 1 month without detectable loss of activity. Reconstituted antibody can also be aliquotted and stored frozen at -20° C to -70° C in a manual defrost freezer for six months without detectable loss of activity. **Avoid repeated freeze-thaw cycles.**

## Specificity

This antibody detects rhN-Cadherin in direct ELISAs and Western blots. In these applications, this antibody shows no cross-reactivity with rhCadherin-4, -6, -8, -11, -12, -13, -17, hE-Cadherin, rhP-Cadherin and rhVE-Cadherin.

## Applications

**Western blot** - This antibody can be used at 1 - 2 µg/mL with the appropriate secondary reagents to detect human N-Cadherin. Using a colorimetric detection system, the detection limit for rhN-Cadherin is approximately 1 ng/lane under non-reducing and reducing conditions. Chemiluminescent detection will increase sensitivity by 5 to 50 fold.

**Flow cytometry** - This antibody was tested for flow cytometry using HEK293 human embryonic kidney cells. Dilute this antibody to 0.2 mg/mL and add 10 µL of the diluted solution to 1 - 2.5 x 10<sup>5</sup> cells in a total reaction volume not exceeding 200 µL. The binding of unlabeled monoclonal antibodies may be visualized by adding 10 µL of a 25 µg/mL stock solution of a secondary developing reagent such as goat anti-rat IgG conjugated to a fluorochrome.

**Direct ELISA** - This antibody can be used at 0.5 - 1.0 µg/mL with the appropriate secondary reagents to detect human N-Cadherin. The detection limit for rhN-Cadherin is approximately 1 ng/well.

**Optimal dilutions should be determined by each laboratory for each application.**