

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human Cadherin-12 in direct ELISAs and Western blots. In direct ELISAs, less than 5% cross-reactivity with recombinant human (rh) Cadherin-8, rhCadherin-11, rhN-Cadherin, and rhVE-Cadherin is observed and less than 1% cross-reactivity with rhE-cadherin.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	<i>S. frugiperda</i> insect ovarian cell line Sf 21-derived recombinant human Cadherin-12 Gly55-Pro609 Accession # P55289
Conjugate	Alexa Fluor 405 Excitation Wavelength: 405 nm Emission Wavelength: 421 nm
Formulation	Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.

APPLICATIONS

Please Note: Optimal dilutions should be determined by each laboratory for each application. [General Protocols](#) are available in the Technical Information section on our website.

Western Blot Optimal dilution of this antibody should be experimentally determined.

PREPARATION AND STORAGE

Shipping The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.

Stability & Storage Protect from light. Do not freeze. 12 months from date of receipt, 2 to 8 °C as supplied

BACKGROUND

The cadherin superfamily is a large family of membrane-associated glycoproteins that engage in homotypic, calcium-dependent, cell-cell adhesion events. The superfamily can be divided into at least four subfamilies based on its member's extracellular (EC) regions and cytoplasmic domains (1, 2). These include classical cadherins, desmosomal cadherins, protocadherins, and cadherin-like molecules that contain a variable number of EC and transmembrane (TM) domains (1). Cadherin-12, also known as brain-cadherin and N-cadherin 2, is a 150 kDa classical cadherin. Classical family molecules are modular in their extracellular region, mediating calcium-dependent cell-cell adhesion through their five EC Ca⁺⁺-binding repeats (2). Cadherin-12 can be further identified as a type II classical cadherin, due to the absence of a His-Ala-Val motif in its most N-terminal cadherin repeat (3). Human Cadherin-12 is synthesized as a 794 amino acid (aa) type I transmembrane preproprotein that contains a 23 aa signal peptide, a 31 aa prosequence, a 555 aa extracellular region, a 28 aa transmembrane segment, and a 157 aa cytoplasmic domain (4, 5). The five EC cadherin domains are approximately 110 aa in length and generate two β-sheets that are oriented like bread in a sandwich. Human Cadherin-12 EC region is 96% aa identical to mouse Cadherin-12 EC region. Cadherin-12 is expressed specifically in CNS neurons. The bulk of its expression is postnatal, and it is proposed to be involved in synaptogenesis (4). As a classic cadherin, Cadherin-12 will form homodimers and promote intercellular adhesion with itself and, possibly, cadherins-8 and -14 (6).

PRODUCT SPECIFIC NOTICES

This product is provided under an agreement between Life Technologies Corporation and R&D Systems, Inc., and the manufacture, use, sale or import of this product is subject to one or more US patents and corresponding non-US equivalents, owned by Life Technologies Corporation and its affiliates. The purchase of this product conveys to the buyer the non-transferable right to use the purchased amount of the product and components of the product only in research conducted by the buyer (whether the buyer is an academic or for-profit entity). The sale of this product is expressly conditioned on the buyer not using the product or its components (1) in manufacturing; (2) to provide a service, information, or data to an unaffiliated third party for payment; (3) for therapeutic, diagnostic or prophylactic purposes; (4) to resell, sell, or otherwise transfer this product or its components to any third party, or for any other commercial purpose. Life Technologies Corporation will not assert a claim against the buyer of the infringement of the above patents based on the manufacture, use or sale of a commercial product developed in research by the buyer in which this product or its components was employed, provided that neither this product nor any of its components was used in the manufacture of such product. For information on purchasing a license to this product for purposes other than research, contact Life Technologies Corporation, Cell Analysis Business Unit, Business Development, 29851 Willow Creek Road, Eugene, OR 97402, Tel: (541) 465-8300. Fax: (541) 335-0354.