Human Cadherin-4/R-Cadherin Alexa Fluor® 532-conjugated Antibody

Antigen Affinity-purified Polyclonal Goat IgG
Catalog Number: AF2217X
100 µg

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human Cadherin-4/R-Cadherin in direct ELISAs and Western blots. In direct ELISAs and Western blots, less than 5% cross-reactivity with recombinant human (rh) N-Cadherin is observed and less than 1% cross-reactivity with rhCadherin-8, rhCadherin-11
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	Mouse myeloma cell line NS0-derived recombinant human Cadherin-4/R-Cadherin His21-Ala734 (Lys347Trp) Accession # P55283
Conjugate	Alexa Fluor 532 Excitation Wavelength: 534 nm Emission Wavelength: 553 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 both homo- and heterotypic, 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-4, also known as R-Cadherin, is a classical cadherin of 120-140 kDa (3, 4). Human Cadherin-4 is synthesized as a 916 amino acid (aa) type I transmembrane glycoprotein that contains a 20 aa signal peptide, a 149 aa prosequence, a 565 aa extracellular region (EC), a 22 aa transmembrane segment, and a 160 aa cytoplasmic domain (5, 6). There are five EC cadherin domains that are approximately 110 aa in length. This pattern is consistent with classical cadherin family molecules that are modular in their extracellular region and mediate calcium-dependent cell-cell adhesion through their Ca^{++}-binding repeats (2). One potential Cadherin-4 splice variant involves the preprosegment and shows 32 aa substitution for the N-terminal 124 amino of the full-length precursor (7). The extracellular region of human Cadherin-4 is 96% aa identical to mouse Cadherin-4 extracellular region (3). Cadherin-4 is expressed in vascular smooth muscle (8), pancreatic β-cells (9), thyroid follicular cells (10), bone marrow Lin^- HSCs (11), sensory neurons of the dorsal root ganglia (12), and, possibly, astrocytes and endothelium of the retina (13). As a classic cadherin, Cadherin-4 will form both homodimers and heterodimers with N-cadherin (4, 14). These complexes translate into adhesion multimers in cis- and trans-configurations. Such structures serve to both unite adjacent cells, and provide guidance for migrating cells/processes (13). Additionally, R-Cadherin is associated with cell quiescence, as a loss of cell Cadherin-4 expression is correlated with cell proliferation (8). Finally, R-Cadherin is reported to bind to KLRG1 (killer cell lectin-like receptor G1). This inactivates NK cell cytotoxicity, and provides protection for R-Cadherin expressing cells (15).

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.

Bio-Techne®
Global | bio-techne.com info@bio-techne.com techsupport@bio-techne.com TEL: 1.612.379.2956
USA | TEL: 800.343.7475 Canada | TEL: 855.668.8722 Europe | Middle East | Africa TEL: +44.0.1235.529449
China | info.cn@bio-techne.com TEL: 400.821.3475