

#### DESCRIPTION

|                           |                                                                                                                                                                                                                                                                             |
|---------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Species Reactivity</b> | Human                                                                                                                                                                                                                                                                       |
| <b>Specificity</b>        | Detects human Cadherin-6/KCAD in direct ELISAs.                                                                                                                                                                                                                             |
| <b>Source</b>             | Monoclonal Mouse IgG <sub>3</sub> Clone # 427903                                                                                                                                                                                                                            |
| <b>Purification</b>       | Protein A or G purified from hybridoma culture supernatant                                                                                                                                                                                                                  |
| <b>Immunogen</b>          | Mouse myeloma cell line NS0-derived recombinant human Cadherin-6/KCAD<br>Ser54-Ala615<br>Accession # P55285                                                                                                                                                                 |
| <b>Conjugate</b>          | Alexa Fluor 700<br>Excitation Wavelength: 675-700 nm<br>Emission Wavelength: 723 nm                                                                                                                                                                                         |
| <b>Formulation</b>        | Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide<br><br>*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.

**Immunohistochemistry** Optimal dilution of this antibody should be experimentally determined.

#### PREPARATION AND STORAGE

|                                |                                                                                                                   |
|--------------------------------|-------------------------------------------------------------------------------------------------------------------|
| <b>Shipping</b>                | The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below. |
| <b>Stability &amp; Storage</b> | 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-to-cell adhesion events. The superfamily can be divided into at least four subfamilies based on the 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-6, also known as KCAD or K-cadherin, is a classical cadherin of 110-120 kD that has at least one full length and two alternate splice forms ranging in size from 105-120 kDa (3). Human Cadherin-6 is synthesized as a 790 amino acid (aa) type I transmembrane glycoprotein that contains a 18 aa signal peptide, a 35 aa prosequence, a 562 aa extracellular region, a 21 aa transmembrane segment, and a 154 aa cytoplasmic domain (4, 5). 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-to-cell adhesion through their Ca<sup>++</sup>-binding repeats (2). Due to the absence of a His-Ala-Val motif in its most N-terminal cadherin repeat, Cadherin-6 can be further classified as a type II classical cadherin (4). One Cadherin-6 splice variant (termed 6/2) shows a 9 aa substitution for the 94 aa that span residues 283 to 376 of the full-length extracellular region (3). A second splice variant shows a 36 aa substitution for the C-terminal 163 aa of the transmembrane and cytoplasmic region (6). Human Cadherin-6 shares 98% aa sequence identity with rat Cadherin-6, plus 60% and 58% aa identity with human cadherin 8 and 11, respectively, within the extracellular regions. Cadherin-6 has high expression in kidney, brain, and cerebellum, and low expression in lung, pancreas, gastric mucosa, and cytotrophoblasts (4, 5, 7, 8, 9). Cadherin-6 is also found in renal, lung, and ovarian carcinoma (7, 10). As a classic cadherin, Cadherin-6 will form homodimers and promote intercellular adhesion with itself and possibly cadherin-9 and -14 (4, 11).

#### 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.