

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human Cadherin-6/KCAD in direct ELISAs.
Source	Monoclonal Mouse IgG ₃ Clone # 427903
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Mouse myeloma cell line NS0-derived recombinant human Cadherin-6/KCAD Ser54-Ala615 Accession # P55285
Conjugate	Alexa Fluor 488 Excitation Wavelength: 488 nm Emission Wavelength: 515-545 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.

Immunohistochemistry 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-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⁺⁺-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).

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