

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human Cadherin-13 in direct ELISAs and Western blots. In direct ELISAs, approximately 100% cross-reactivity with recombinant mouse Cadherin-13 is observed, and less than 10% cross-reactivity with recombinant human (rh) N-Cadherin is observed, and
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	Mouse myeloma cell line NS0-derived recombinant human Cadherin-13 Glu23-Ala692 Accession # P55290
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.

CyTOF-ready	Optimal dilution of this antibody should be experimentally determined.
Western Blot	Optimal dilution of this antibody should be experimentally determined.
Flow Cytometry	Optimal dilution of this antibody should be experimentally determined.
Immunocytochemistry	Optimal dilution of this antibody should be experimentally determined.
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

Cadherin-13, also known as T-Cadherin and H-Cadherin, is a 105 kDa member of the cadherin family of transmembrane glycoproteins that mediate calcium-dependent intercellular adhesion (1). However, Cadherin-13 is an atypical member, lacking transmembrane and cytosolic domains and containing a GPI moiety that anchors Cadherin-13 to the plasma membrane (1-2). Human Cadherin-13 is synthesized as a 713 amino acid (aa) precursor that contains a 22 aa signal sequence, a 116 aa propeptide, a 555 aa mature chain, and a second propeptide of 20 aa that is removed in the mature form to reveal the GPI anchor. The mature form contains five cadherin domains and eight potential sites for N-linked glycosylation. Mature human Cadherin-13 shares 96% aa identity with mature mouse Cadherin-13. Cadherin-13 is expressed in various tissues. It is highly expressed in the heart, and in the CNS, Cadherin-13 is expressed in the cerebral cortex, medulla, hippocampus, amygdala, thalamus, and substantia nigra (2). There are higher levels of Cadherin-13 in the adult brain than in developing brain (2). Cadherin-13 is also expressed in skin in the basal layer of the epidermis, lung, liver, kidney, and blood vessels (2). The structural characteristics of Cadherin-13 predict that it is unlikely to function as a true adhesion molecule *in vivo* (2). It is suggested that it may act rather as a signaling receptor participating in recognition of the environment and regulation of cell motility, proliferation, and phenotype (2). Cellular expression levels of Cadherin-13 in various tissues often correlate, negatively or positively, with the proliferative potential of the cells (2). Cadherin-13 may also act as a suppressor of tumor cell growth (2). This potential role for Cadherin-13 was emphasized by localization of Cadherin-13 gene to chromosome 16q24, a region exhibiting loss of heterozygosity in many solid tumors (2). Allelic loss of chromosome bands 16q24.1-q24.2 and reduced expression of Cadherin-13, as well as hypermethylation of the remaining allele have been detected in a considerable number of human cancers (2).

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