Human/Mouse Cadherin-13
Alexa Fluor® 594-conjugated Antibody

Monoclonal Rat IgG_{2A} Clone # 392411

Catalog Number: FAB3264T

100 µg

DESCRIPTION

Species Reactivity	Human/Mouse
Specificity	Detects human Cadherin-13 in direct ELISAs and Western blots. In direct ELISAs and Western blots, no cross-reactivity with recombinant human (rh) E-Cadherin, rhN-Cadherin, rhP-Cadherin, rhVE-Cadherin, rhCadherin-8, -11, -12 or -17 is observed.
Source	Monoclonal Rat IgG_{2A} Clone # 392411
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Mouse myeloma cell line NS0-derived recombinant human Cadherin-13 Glu23-Ala692 Accession # P55290
Conjugate	Alexa Fluor 594 Excitation Wavelength: 590 nm Emission Wavelength: 617 nm
Formulation	Supplied 0.2 mg/mL in a saline solution containing BSA and Sodium Azide. See Certificate of Analysis for details. *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.*

	Recommended Concentration	Sample
Flow Cytometry	0.25-1 µg/10^6 cells	NCI-H460 human large cell lung carcinoma cell line

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).

References:

1. Tanihara, H. *et al.* (1994) Cell Adhes. Commun. **2**:15.
2. Philippova, M. *et al.* (2009) Cell. Signal. **21**:1035.

PRODUCT SPECIFIC NOTICES

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