

DESCRIPTION

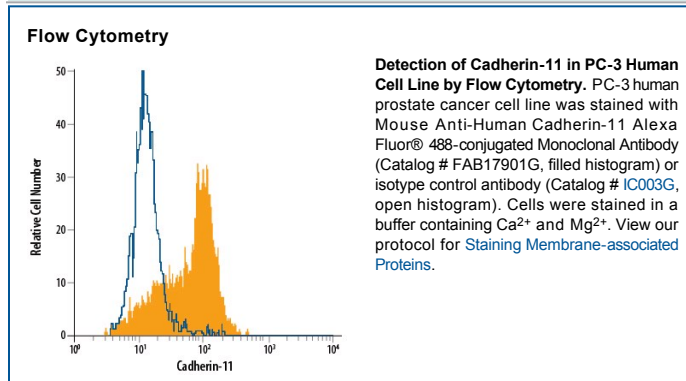
Species Reactivity	Human
Specificity	Detects human Cadherin-11 in direct ELISAs. In direct ELISAs, no cross-reactivity with recombinant human (rh) Cadherin-4, -6, -8, -12, -13, -17, rhE-Cadherin, rhN-Cadherin, rhP-Cadherin, or rhVE-Cadherin is observed.
Source	Monoclonal Mouse IgG _{2A} Clone # 667039
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Mouse myeloma cell line NS0-derived recombinant human Cadherin-11 Phe23-Thr617 Accession # AAA35622
Conjugate	Alexa Fluor 488 Excitation Wavelength: 488 nm Emission Wavelength: 515-545 nm
Formulation	Supplied 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	5 μ L/ 10^6 cells	See Below

DATA



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. <ul style="list-style-type: none"> ● 12 months from date of receipt, 2 to 8 °C as supplied.

BACKGROUND

Cadherin-11, also known as OB-Cadherin, is a 120 kDa member of the classical Cadherin family of calcium-dependent homophilic adhesion proteins. Cadherins are involved in multiple processes including embryonic development, cell migration, and maintenance of epithelial integrity (1). Cadherin-11 is expressed in embryonic mesodermal tissues and contributes to the morphogenesis of the nervous and skeletal systems (2-4). It is expressed on osteoblasts in the adult where it promotes the differentiation of both osteoblasts and chondrocytes (5). Cadherin-11 is up-regulated on breast cancer and prostate cancer cells which preferentially metastasize to bone (6, 7). It facilitates this metastasis via homophilic adhesion to bone marrow stroma and osteoblast-expressed Cadherin-11 (6-8). In the synovium, Cadherin-11 supports adhesion between synoviocytes but promotes cell invasion in synovitis and rheumatoid arthritis (9, 10). Its up-regulation in the vasculature following injury contributes to intimal hyperplasia by inducing smooth muscle cell migration and proliferation (11). In the nervous system, Cadherin-11 interacts with FGF R1 to promote neurite extension from spinal cord explants (12). Mature human Cadherin-11 consists of a 564 amino acid (aa) extracellular domain (ECD) with five tandem Cadherin repeats, a 23 aa transmembrane segment, and a 156 aa cytoplasmic domain (13, 14). Within the ECD, human Cadherin-11 shares 97% and 98% aa sequence identity with mouse and rat Cadherin-11, respectively. An 80 kDa portion of the Cadherin-11 ECD can be shed by proteolytic cleavage, and this fragment competes with the full length molecule for cell adhesion (3, 15). Alternate splicing of human Cadherin-11 generates an 85 kDa isoform with substituted transmembrane and cytoplasmic regions (14, 15).

References:

1. Pokutta, S. and W.I. Weis (2007) *Annu. Rev. Cell Dev. Biol.* **23**:237.
2. Kimura, Y. *et al.* (1995) *Dev. Biol.* **169**:347.
3. McCusker, C. *et al.* (2009) *Mol. Biol. Cell* **20**:78.
4. Clendenon, S.G. *et al.* (2009) *Dev. Dyn.* **238**:1909.
5. Kii, I. *et al.* (2004) *J. Bone Mineral Res.* **19**:1840.
6. Tamura, D. *et al.* (2008) *Int. J. Oncol.* **33**:17.
7. Chu, K. *et al.* (2008) *Mol. Cancer Res.* **6**:1259.
8. Huang, C.-F. *et al.* (2010) *Cancer Res.* **70**:4580.
9. Valencia, X. *et al.* (2004) *J. Exp. Med.* **200**:1673.
10. Kiener, H.P. *et al.* (2009) *Arthritis Rheum.* **60**:1305.
11. Monahan, T.S. *et al.* (2007) *J. Vasc. Surg.* **45**:581.
12. Boscher, C. and R.-M. Mege (2008) *Cell. Signal.* **20**:1061.
13. Tanihara, H. *et al.* (1994) *Cell Adhes. Commun.* **2**:15.
14. Okazaki, M. *et al.* (1994) *J. Biol. Chem.* **269**:12092.
15. Kawaguchi, J. *et al.* (1999) *J. Bone Mineral Res.* **14**:764.

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