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ITGA6 Antibody (isoform 2 S1064)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP2753A

Product Information

Application	IF, WB, IHC-P, E
Primary Accession	P23229
Other Accession	P26007
Reactivity	Human
Predicted	Chicken
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Calculated MW	126606
Antigen Region	1043-1072

Additional Information

Gene ID	3655
Other Names	Integrin alpha-6, CD49 antigen-like family member F, VLA-6, CD49f, Integrin alpha-6 heavy chain, Integrin alpha-6 light chain, Processed integrin alpha-6, Alpha6p, ITGA6
Target/Specificity	This ITGA6 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 1043-1072 amino acids from isoform 2 of human ITGA6.
Dilution	IF~~1:200 WB~~1:1000 IHC-P~~1:100~500 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	ITGA6 Antibody (isoform 2 S1064) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	ITGA6
Function	Integrin alpha-6/beta-1 (ITGA6:ITGB1) is a receptor for laminin on platelets

	(By similarity). Integrin alpha-6/beta-1 (ITGA6:ITGB1) is present in oocytes and is involved in sperm-egg fusion (By similarity). Integrin alpha-6/beta-4 (ITGA6:ITGB4) is a receptor for laminin in epithelial cells and it plays a critical structural role in the hemidesmosome (By similarity). ITGA6:ITGB4 binds to NRG1 (via EGF domain) and this binding is essential for NRG1-ERBB signaling (PubMed:20682778). ITGA6:ITGB4 binds to IGF1 and this binding is essential for IGF1 signaling (PubMed:22351760). ITGA6:ITGB4 binds to IGF2 and this binding is essential for IGF2 signaling (PubMed:28873464).
Cellular Location	Cell membrane; Single-pass type I membrane protein. Cell membrane; Lipid-anchor
Tissue Location	Integrin alpha-6/beta-4 is predominantly expressed by epithelia. Isoforms containing segment X1 are ubiquitously expressed. Isoforms containing segment X1X2 are expressed in heart, kidney, placenta, colon, duodenum, myoblasts and myotubes, and in a limited number of cell lines; they are always coexpressed with the ubiquitous isoform containing segment X1. In some tissues (e.g Salivary gland), isoforms containing cytoplasmic segment A and isoforms containing segment B are detected while in others, only isoforms containing one cytoplasmic segment are found (segment A in epidermis and segment B in kidney). Processed integrin alpha-6: Expressed at low levels in normal prostate tissue with elevated levels in prostate cancer tissue (at protein level) (PubMed:15023541)

Background

The ITGA6 protein product is the integrin alpha chain alpha 6. Integrins are integral cell-surface proteins composed of an alpha chain and a beta chain. A given chain may combine with multiple partners resulting in different integrins. For example, alpha 6 may combine with beta 4 in the integrin referred to as TSP180, or with beta 1 in the integrin VLA-6. Integrins are known to participate in cell adhesion as well as cell-surface mediated signalling.

References

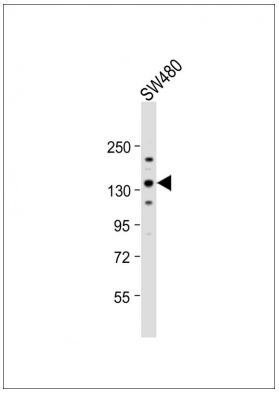
References for protein:
1.Yang,X.H., Cancer Res. 68 (9), 3204-3213 (2008)
2.Hayashi,R., Biochem. Biophys. Res. Commun. 367 (2), 256-263 (2008)

References for HeLa cell line:
1. Scherer WF, Syverton JT, Gey GO (May 1953). "Studies on the propagation in vitro of poliomyelitis viruses. IV. Viral multiplication in a stable strain of human malignant epithelial cells (strain HeLa) derived from an epidermoid carcinoma of the cervix". J. Exp. Med. 97 (5): 695–710. [PubMed:13052828].

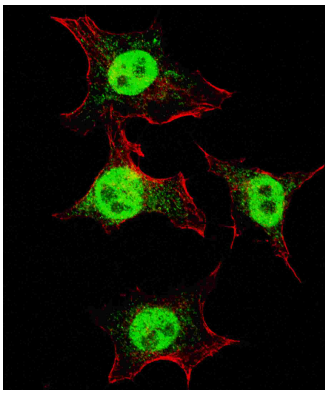
2. Macville M, Schr□ck E, Padilla-Nash H, Keck C, Ghadimi BM, Zimonjic D, Popescu N, Ried T (January 1999). "Comprehensive and definitive molecular cytogenetic characterization of HeLa cells by spectral karyotyping". Cancer Res. 59 (1): 141–50. [PubMed: 9892199].
3. Rahbari R, Sheahan T, Modes V, Collier P, Macfarlane C, Badge RM (April 2009). "A novel L1 retrotransposon marker for HeLa cell line identification". BioTechniques 46 (4): 277–84. [PubMed: 19450234].

4. Capes-Davis A, Theodosopoulos G, Atkin I, Drexler HG, Kohara A, MacLeod RA, Masters JR, Nakamura Y, Reid YA, Reddel RR, Freshney RI (July 2010). "Check your cultures! A list of cross-contaminated or misidentified cell lines". Int. J. Cancer 127 (1): 1–8. [PubMed:20143388].

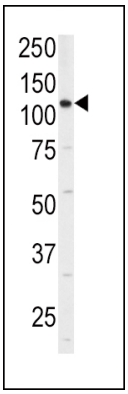
Images



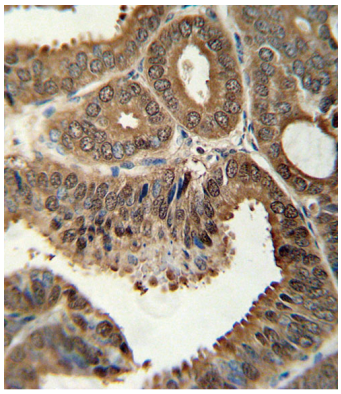
Anti-ITGA6 Antibody (isoform 2 S1064) at 1:1000 dilution + SW480 whole cell lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 119 kDa Blocking/Dilution buffer: 5% NFDM/TBST.



Fluorescent confocal image of HeLa cells stained with ITGA6 (isoform 2 S1064) antibody. HeLa cells were fixed with 4% PFA (20 min), permeabilized with Triton X-100 (0.2%, 30 min). Cells were then incubated with AP2753a ITGA6 (isoform 2 S1064) primary antibody (1:200, 2 h at room temperature). For secondary antibody, Alexa Fluor® 488 conjugated donkey anti-rabbit antibody (green) was used (1:1000, 1h). Nuclei were counterstained with Hoechst 33342 (blue) (10 µg/ml, 5 min). Note the highly specific localization of the ITGA6 mainly to the nucleus, supported by Human Protein Atlas Data (http://www.proteinatlas.org/ENSG00000091409).



Western blot analysis of anti-ITGA6 Antibody (isoform 2 S1064) (Cat.#AP2753a) in 293 cell line lysates (35ug/lane). ITGA6(arrow) was detected using the purified Pab.



Formalin-fixed and paraffin-embedded human colon carcinoma tissue reacted with ITGA6 Antibody (isoform 2 S1064) (Cat.#AP2753a), which was peroxidase-conjugated to the secondary antibody, followed by DAB staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated.