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PCDH12 Antibody

Catalog # ASC10865

Product Information

Application	WB, E, IHC-P
Primary Accession	Q9NPG4
Other Accession	NP_057664, 7706113
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	128995
Concentration (mg/ml)	1 mg/mL
Conjugate	Unconjugated
Application Notes	PCDH12 antibody can be used for detection of PCDH12 by Western blot at 2 g/mL. Antibody can also be used for immunohistochemistry starting at 5 g/mL.

Additional Information

Gene ID	51294
Other Names	Protocadherin-12, Vascular cadherin-2, Vascular endothelial cadherin-2, VE-cad-2, VE-cadherin-2, PCDH12
Target/Specificity	PCDH12; This antibody is predicted to not cross-react with PCDH18.
Reconstitution & Storage	PCDH12 antibody can be stored at 4℃ for three months and -20℃, stable for up to one year. As with all antibodies care should be taken to avoid repeated freeze thaw cycles. Antibodies should not be exposed to prolonged high temperatures.
Precautions	PCDH12 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	PCDH12 (HGNC:8657)
Function	Cellular adhesion molecule that may play an important role in cell-cell interactions at interendothelial junctions (By similarity). Acts as a regulator of cell migration, probably via increasing cell- cell adhesion (PubMed:21402705). Promotes homotypic calcium-dependent aggregation and adhesion and clusters at intercellular junctions (By similarity). Unable to bind to catenins, weakly associates with the cytoskeleton (By similarity).
Cellular Location	[Protocadherin-12]: Cell membrane; Single-pass type I membrane protein. Cell junction {ECO:0000250|UniProtKB:O55134}

Tissue Location	Expressed in highly vascularized tissues including the heart and placenta, but most tissues contain a low level of expression (PubMed:11063261). Prominent expression in the spleen (PubMed:11063261). Present in villous and extravillous trophoblast (at protein level) (PubMed:21402705).

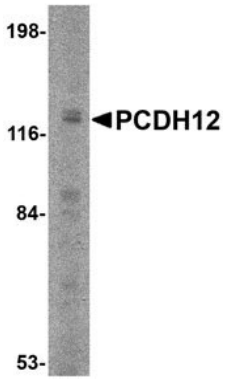
Background

PCDH12 Antibody: Protocadherins comprise the largest group within the cadherin family of calcium-dependent cell-cell adhesion molecules. Protocadherin 12 (PCDH12) was initially identified through PCR screening of mouse heart microvascular endothelial cell RNA; further experiments revealed its mRNA to be strongly expressed in highly vascularized organs such as lung and kidney, in addition to glycogen-rich trophoblasts in the placenta. PCDH12-null mice are viable and fertile, but show reduced placental and embryonic sizes when compared to wild-type mice. Further studies showed significant expression changes in 2, 289 genes, including those involved in tissue morphogenesis, angiogenesis, cell-matrix adhesion and migration, immune response and chromatin remodeling.

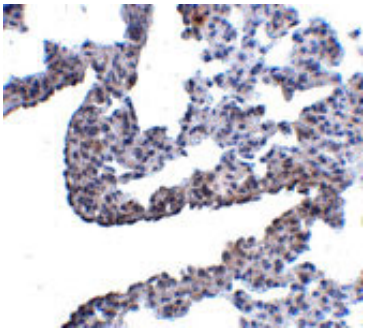
References

Frank M and Kemler R. Protocadherins. Curr. Opin. Cell Biol.2002; 14:557-62.
Telo P, Breviaro F, Huber P, et al. Identification of a novel cadherin (vascular endothelial cadherin-2) located at intercellular junctions in endothelial cells. J. Biol. Chem.1998; 28:17565-72.
Rampon C, Prandini MH, Bouillot S, et al. Protocadherin 12 (VE-cadherin 2) is expressed in endothelial, trophoblast, and mesangial cells. Exp. Cell Res.2005; 302:48-60.
Rampon C, Bouillot S, Climescu-Haulica A, et al. Protocadherin 12 deficiency alters morphogenesis and transcriptional profile of the placenta. Physiol. Genomics2008; 34:193-204.

Images



Western blot analysis of PCDH12 in K562 cell lysate with PCDH12 antibody at 2 µg/mL.



Immunohistochemistry of PCDH12 in rat lung tissue with PCDH12 antibody at 5 µg/mL.