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TSPAN12 Rabbit pAb

Catalog # AP98993

Product Information

Application	IHC-P, IHC-F, IF
Primary Accession	O95859
Other Accession	O95859
Reactivity	Rat, Human
Predicted	Pig, Mouse, Rabbit, Chicken, Horse
Host	Rabbit
Clonality	Polyclonal
Calculated MW	35383
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human TSPAN12
Epitope Specificity	1-100/305
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SIMILARITY	Belongs to the tetraspanin (TM4SF) family.
SUBUNIT	Component of a complex, at least composed of TSPAN12, FZD4 and norrin (NDP). Interacts (when palmitoylated) with ADAM10. Interacts with MMP14/MT1-MMP.
Post-translational modifications	Palmitoylated; required for interaction with ADAM10. The precise position of palmitoylated residues is unclear and occurs either on Cys-9, Cys-12 and/or Cys-83.
DISEASE	Defects in TSPAN12 are the cause of vitreoretinopathy exudative type 5 (EVR5) [MIM:613310]. It is a disorder of the retinal vasculature characterized by an abrupt cessation of growth of peripheral capillaries, leading to an avascular peripheral retina. This may lead to compensatory retinal neovascularization, which is thought to be induced by hypoxia from the initial avascular insult. New vessels are prone to leakage and rupture causing exudates and bleeding, followed by scarring, retinal detachment and blindness. Clinical features can be highly variable, even within the same family. Patients with mild forms of the disease are asymptomatic, and their only disease related abnormality is an arc of avascular retina in the extreme temporal periphery. Note=TSPAN12 dominant and recessive mutations have been identified in patients with exudative vitreoretinopathy. Patients with mutations in both alleles of TSPAN12 have severe exudative vitreoretinopathy or retinal dysplasia. These mutations appear to result in a milder phenotype in heterozygous mutation carriers (PubMed:22427576).
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	The protein encoded by this gene is a member of the transmembrane 4 superfamily, also known as the tetraspanin family. Most of these members are cell-surface proteins that are characterized by the presence of four hydrophobic domains. The proteins mediate signal transduction events that play a role in the regulation of cell development, activation, growth and motility. [provided by RefSeq, Jul 2008]

Additional Information

Gene ID	23554
Other Names	EVR5; NET-2; NET2; TM4SF12; TSN12_HUMAN; TSPAN12; Tspan-12; Tetraspan NET-2; Transmembrane 4 superfamily member 12; tetraspanin 12
Dilution	IHC-P=1:100-500,IHC-F=1:100-500,IF=1:100-500
Storage	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

Protein Information

Name	TSPAN12
Synonyms	NET2, TM4SF12
Function	Regulator of cell surface receptor signal transduction. Plays a central role in retinal vascularization by regulating norrin (NDP) signal transduction. Acts in concert with norrin (NDP) to promote FZD4 multimerization and subsequent activation of FZD4, leading to promote accumulation of beta-catenin (CTNNB1) and stimulate LEF/TCF-mediated transcriptional programs. Suprisingly, it only activates the norrin (NDP)-dependent activation of FZD4, while it does not activate the Wnt- dependent activation of FZD4, suggesting the existence of a Wnt- independent signaling that also promote accumulation the beta-catenin (CTNNB1) (By similarity). Acts as a regulator of membrane proteinases such as ADAM10 and MMP14/MT1-MMP. Activates ADAM10-dependent cleavage activity of amyloid precursor protein (APP). Activates MMP14/MT1-MMP- dependent cleavage activity.
Cellular Location	Cell membrane; Multi-pass membrane protein

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