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Norrin Antibody

Catalog # ASC10883

Product Information

Application	WB, ICC, E
Primary Accession	Q00604
Other Accession	NP_000257, 4557789
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	15044
Concentration (mg/ml)	1 mg/mL
Conjugate	Unconjugated
Application Notes	Norrin antibody can be used for detection of Norrin by Western blot at 1 - 2 g/mL. Antibody can also be used for immunocytochemistry starting at 5 g/mL.

Additional Information

Gene ID	4693
Other Names	Norrin, Norrie disease protein, X-linked exudative vitreoretinopathy 2 protein, NDP, EVR2
Target/Specificity	NDP;
Reconstitution & Storage	Norrin 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	Norrin Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	NDP
Synonyms	EVR2
Function	Activates the canonical Wnt signaling pathway through FZD4 and LRP5 coreceptor. Plays a central role in retinal vascularization by acting as a ligand for FZD4 that signals via stabilizing beta-catenin (CTNNB1) and activating LEF/TCF-mediated transcriptional programs. Acts in concert with TSPAN12 to activate FZD4 independently of the Wnt- dependent activation of FZD4, suggesting the existence of a Wnt- independent signaling that also promote accumulation the beta-catenin (CTNNB1). May be involved in a pathway that

	regulates neural cell differentiation and proliferation. Possible role in neuroectodermal cell-cell interaction.
Cellular Location	Secreted.
Tissue Location	Expressed in the outer nuclear, inner nuclear and ganglion cell layers of the retina, and in fetal and adult brain

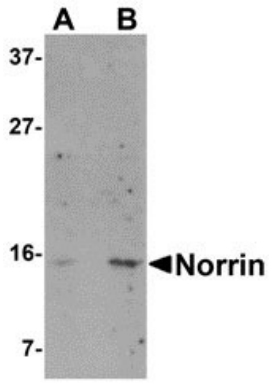
Background

Norrin Antibody: Norrie disease is an X-linked genetic disorder characterized by progressive atrophy of the eyes, mental disturbances and deafness. The gene responsible for this disease was initially identified through positional cloning. Norrin, the gene product, encodes a small secreted, cysteine-rich protein that is thought to act as a ligand for the Wnt-receptor/beta-catenin signal pathway despite having sequence homology with the Wnt family of proteins. Mice lacking this gene have abnormal blood vessel growth in the vitreous and a disorganized retina; transgenic ectopic expression of Norrin restores normal retinal vasculature. Recent evidence shows that Norrin can attenuate tPA and uPA-mediated death of transformed rat retinal ganglion cells (RGC-5) by activating the Wnt/beta-catenin pathway and regulating the phosphorylation of LRP-1, a cell surface receptor for tPA and uPA, suggesting the Norrin may function in vivo by regulating kinases which may alter the phosphorylation of LRP-1.

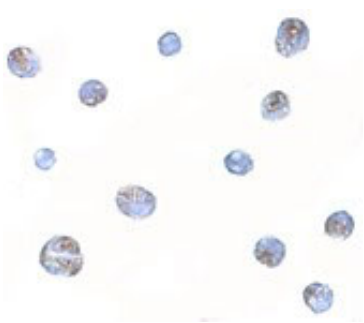
References

Bergen W, Meindl A, van de Pol TJ, et al. Isolation of a candidate gene for Norrie disease by positional cloning. Nat. Genet.1992; 1:199-203.
Meitinger T, Meindl A, Bork P, et al. Molecular modelling of the Norrie disease protein predicts a cysteine knot growth factor tertiary structure. Nat. Genet.1993; 5:376-80.
Xu Q, Wang Y, Dabdoub A, et al. Vascular development in the retina and inner ear: control by Norrin and Frizzled-4, a high-affinity ligand-receptor pair. Cell2004; 116:883-95.
Ohlmann A, Scholz M, Goldwich A, et al. Ectopic norrin induces growth of ocular capillaries and restores normal retinal angiogenesis. J. Neurosci.2005; 25:1701-10.

Images



Western blot analysis of Norrin in Jurkat cell lysate with Norrin antibody at (A) 1 and (B) 2 µg/mL.



Immunocytochemistry of Norrin in Jurkat cells with Norrin antibody at 5 µg/mL.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.