

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human Norrin in direct ELISAs and Western blots. In direct ELISAs, approximately 50% cross-reactivity with recombinant mouse Norrin is observed.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	<i>E. coli</i> -derived recombinant human Norrin Lys25-Ser133 Accession # Q00604
Conjugate	Alexa Fluor 647 Excitation Wavelength: 650 nm Emission Wavelength: 668 nm
Formulation	Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide *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.

Western Blot	Optimal dilution of this antibody should be experimentally determined.
Blockade of Receptor-ligand Interaction	Optimal dilution of this antibody should be experimentally determined.
Immunohistochemistry	Optimal dilution of this antibody should be experimentally determined.

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. 12 months from date of receipt, 2 to 8 °C as supplied

BACKGROUND

Norrin (also called Norrie Disease Protein or NDP) is a secreted regulatory protein that remains tightly associated with the extracellular matrix (1). At least 70 mutations of Norrin have been identified in Norrie disease (X-linked retinal dysplasia) or in a minority of X-linked familial exudative vitreoretinopathy (FEVR). Both are disorders of retinal vascularization that cause blindness (2, 3). Norrin consists of disulfide-linked homodimers that oligomerize further via disulfide bridges to form higher order oligomers containing up to ten units of 12 kDa each. The cysteine-rich C-terminal domain of Norrin is homologous to von Willebrand factor, several extracellular mucin proteins, and members of the TGF-β family. Molecular modeling studies predict that Norrin assumes a cysteine-knot structure typical for the TGF-β family (4). Although Norrin is not related to Wnt family proteins, it functions like a Wnt protein in that it binds with high affinity to the receptor Frizzled-4, requires LDL receptor-related protein (LRP) as a co-receptor, and induces activation of the canonical Wnt signaling pathway (5). Norrin and Frizzled-4 are expressed at relatively low levels in tissues displaying vascular phenotypes and genetic disruption of either gene in mice gives phenotypes with marked similarities (5, 6, 7). Human Norrin shares 100%, 96%, 95%, 94% and 90% amino acid identity with rhesus macaque, canine, bovine, mouse, and chick Norrin, respectively.

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