abcam

Product datasheet

Anti-Frizzled 4 antibody - N-terminal ab150544

1 Image

Overview

Product name	Anti-Frizzled 4 antibody - N-terminal
Description	Rabbit polyclonal to Frizzled 4 - N-terminal
Host species	Rabbit
Tested applications	**Suitable for:** IHC-P
Species reactivity	**Reacts with:** Human **Predicted to work with:** Mouse, Rat, Rabbit, Horse, Hamster, Cow, Dog, Pig, Monkey, Common marmoset
Immunogen	Synthetic peptide, corresponding to 18 amino acid residues from the N terminal extracellular domain of Human Frizzled 4 (NP_036325.2).
Positive control	Human kidney tissue.

Properties

Form	Liquid
Storage instructions	Shipped at 4°C.
Storage buffer	Preservative: 0.1% Sodium azide Constituent: 99% PBS
Purity	Immunogen affinity purified
Clonality	Polyclonal
Isotype	IgG

Applications

Our Abpromise guarantee covers the use of **ab150544** in the following tested applications.

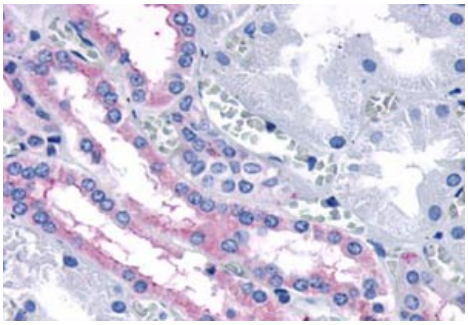
The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
IHC-P		Use a concentration of 30 - 60 µg/ml. Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.

Target

Function	Receptor for Wnt proteins. Most of frizzled receptors are coupled to the beta-catenin (CTNNB1) canonical signaling pathway, which leads to the activation of disheveled proteins, inhibition of GSK-3 kinase, nuclear accumulation of beta-catenin (CTNNB1) and activation of Wnt target genes. Plays a critical role in retinal vascularization by acting as a receptor for Wnt proteins and norrin (NDP). In retina, it can be both activated by Wnt protein-binding, but also by a Wnt-independent signaling via binding of norrin (NDP), promoting in both cases beta-catenin (CTNNB1) accumulation and stimulation of LEF/TCF-mediated transcriptional programs. A second signaling pathway involving PKC and calcium fluxes has been seen for some family members, but it is not yet clear if it represents a distinct pathway or if it can be integrated in the canonical pathway, as PKC seems to be required for Wnt-mediated inactivation of GSK-3 kinase. Both pathways seem to involve interactions with G-proteins. May be involved in transduction and intercellular transmission of polarity information during tissue morphogenesis and/or in differentiated tissues.
Tissue specificity	Almost ubiquitous. Largely expressed in adult heart, skeletal muscle, ovary, and fetal kidney. Moderate amounts in adult liver, kidney, pancreas, spleen, and fetal lung, and small amounts in placenta, adult lung, prostate, testis, colon, fetal brain and liver.
Involvement in disease	Defects in FZD4 are the cause of vitreoretinopathy exudative type 1 (EVR1) [MIM:133780]; also known as autosomal dominant familial exudative vitreoretinopathy (FEVR) or Criswick-Schepens syndrome. EVR1 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.
Sequence similarities	Belongs to the G-protein coupled receptor Fz/Smo family. Contains 1 FZ (frizzled) domain.
Domain	Lys-Thr-X-X-X-Trp motif interacts with the PDZ doman of Dvl (Disheveled) family members and is involved in the activation of the Wnt/beta-catenin signaling pathway. The FZ domain is involved in binding with Wnt ligands.
Cellular localization	Membrane. Cell membrane.

Images



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Frizzled 4 antibody - N-terminal (ab150544)

Immunohistochemical analysis of formalin-fixed, paraffin-embedded Human kidney tissue labeling Frizzled 4 with ab150544 at 30µg/ml.

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