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Anti-Frizzled 4 Picoband Antibody

Catalog # ABO12979

Product Information

Application	WB, IHC-P
Primary Accession	Q9ULV1
Host	Rabbit
Reactivity	Human, Mouse, Rat
Clonality	Polyclonal
Format	Lyophilized
Description	Rabbit IgG polyclonal antibody for Frizzled 4 detection. Tested with WB, IHC-P in Human;Mouse;Rat.
Reconstitution	Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

Additional Information

Gene ID	8322
Other Names	Frizzled-4, Fz-4, hFz4, FzE4, CD344, FZD4
Calculated MW	59881
Application Details	Western blot, 0.1-0.5 □g/ml Immunohistochemistry(Paraffin-embedded Section), 0.5-1 □g/ml
Subcellular Localization	Membrane; Multi-pass membrane protein. Cell membrane; Multi-pass membrane protein.
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.
Source	Eukaryota
Contents	Each vial contains 4mg Trehalose, 0.9mg NaCl, 0.2mg Na_2HPO_4, 0.05mg NaN_3.
Immunogen	A synthetic peptide corresponding to a sequence of human Frizzled 4 (QNLGYNVTKMPNLVGHELQTDAELQLTTFTPLIQY).
Cross Reactivity	No cross reactivity with other proteins.
Storage	At -20˚C; for one year. After r˚Constitution, at 4˚C; for one month. It˚Can also be aliquotted and stored frozen at -20˚C; for a longer time. Avoid

repeated freezing and thawing.

Protein Information

Name	FZD4
Function	Receptor for Wnt proteins (PubMed: 30135577). Most 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 (PubMed:30135577). Plays a critical role in retinal vascularization by acting as a receptor for Wnt proteins and norrin (NDP) (By similarity). In retina, it can be activated by Wnt protein-binding and also by Wnt-independent signaling via binding of norrin (NDP), promoting in both cases beta-catenin (CTNNB1) accumulation and stimulation of LEF/TCF-mediated transcriptional programs (By similarity). 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.
Cellular Location	Cell membrane; Multi-pass membrane protein
Tissue Location	Almost ubiquitous (PubMed:10544037). Largely expressed in adult heart, skeletal muscle, ovary, and fetal kidney (PubMed:10544037). 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 (PubMed:10544037)

Background

Frizzled-4 is a protein that in humans is encoded by the FZD4 gene. This gene is a member of the frizzled gene family. Members of this family encode seven-transmembrane domain proteins that are receptors for the Wingless type MMTV integration site family of signaling proteins. Most frizzled receptors are coupled to the beta-catenin canonical signaling pathway. This protein may play a role as a positive regulator of the Wingless type MMTV integration site signaling pathway. A transcript variant retaining intronic sequence and encoding a shorter isoform has been described, however, its expression is not supported by other experimental evidence.

Images

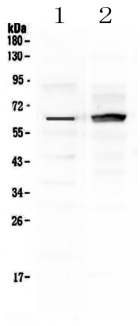


Figure 1. Western blot analysis of Frizzled 4 using anti-Frizzled 4 antibody (ABO12979). Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 50ug of sample under reducing conditions. Lane 1: human placenta tissue lysates,Lane 2: human MCF-7 cell lysates.After Electrophoresis, proteins were transferred to a Nitrocellulose membrane at 150mA for 50-90 minutes. Blocked the membrane with 5% Non-fat Milk/ TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-Frizzled 4 antigen affinity purified polyclonal

antibody (Catalog # ABO12979) at 0.5 □¼g/mL overnight at 4 □°C, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:10000 for 1.5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit with Tanon 5200 system. A specific band was detected for Frizzled 4 at approximately 65KD. The expected band size for Frizzled 4 is at 60KD.

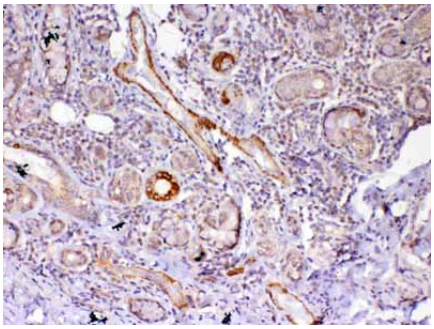


Figure 2. IHC analysis of Frizzled 4 using anti-Frizzled 4 antibody (ABO12979).Frizzled 4 was detected in paraffin-embedded section of human lung cancer tissue. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1 □¼g/ml rabbit anti-Frizzled 4 Antibody (ABO12979) overnight at 4 □°C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37 □°C. The tissue section was developed using Strepavidin-Biotin-Complex (SABC) with DAB as the chromogen.

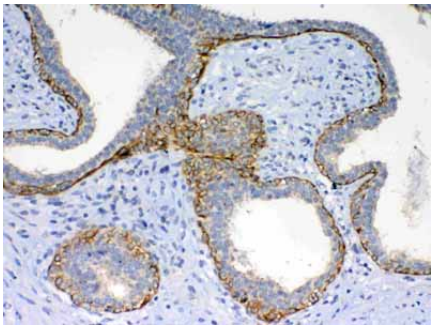


Figure 3. IHC analysis of Frizzled 4 using anti-Frizzled 4 antibody (ABO12979).Frizzled 4 was detected in paraffin-embedded section of human mammary cancer tissue. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1 □¼g/ml rabbit anti-Frizzled 4 Antibody (ABO12979) overnight at 4 □°C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37 □°C. The tissue section was developed using Strepavidin-Biotin-Complex (SABC) with DAB as the chromogen.

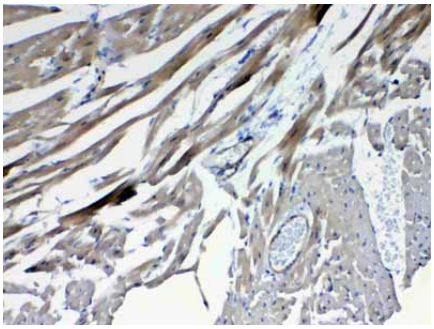
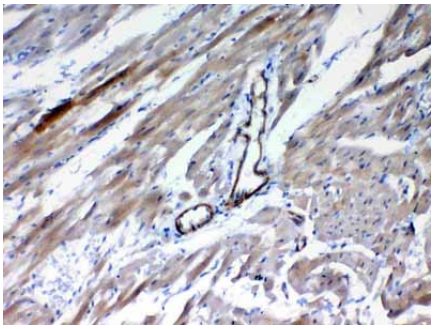


Figure 4. IHC analysis of Frizzled 4 using anti-Frizzled 4 antibody (ABO12979).Frizzled 4 was detected in paraffin-embedded section of mouse heart tissue. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1 □¼g/ml rabbit anti-Frizzled 4 Antibody (ABO12979) overnight at 4 □°C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37 □°C. The tissue section was developed using Strepavidin-Biotin-Complex (SABC) with DAB as the chromogen.

Figure 5. IHC analysis of Frizzled 4 using anti-Frizzled 4 antibody (ABO12979).Frizzled 4 was detected in paraffin-embedded section of rat heart tissue. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1 □¼g/ml rabbit



anti-Frizzled 4 Antibody (ABO12979) overnight at 4 □°C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37 □°C. The tissue section was developed using Strepavidin-Biotin-Complex (SABC) with DAB as the chromogen.

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