Datasheet for ABIN3135345

FZD3 Protein (AA 23-666) (rho-1D4 tag)

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1 Image

Overview

Quantity:	1 mg
Target:	FZD3
Protein Characteristics:	AA 23-666
Origin:	Mouse
Source:	Insect Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This FZD3 protein is labelled with rho-1D4 tag.
Application:	ELISA, Western Blotting (WB), Crystallization (Crys), SDS-PAGE (SDS)

Product Details

Sequence:	HSLFSCEPIT LRMCQDLPYN TTFMPNLLNH YDQQTAALAM EPFHPMVNLD CSRDFRPFLC ALYAPICMEY GRVTLPCRRL CQRAYSECSK LMEMFGVPWP EDMECSRFPD CDEPYPRLVD LNLVGDPTEG APVAVQRDYG FWCPRELKID PDLGYSFLHV RDCSPPCPNM YFRREELSFA RYFIGLISII CLSATLFTFL TFLIDVTRFR YPERPIIFYA VCYMMVSLIF FIGFLLEDRV ACNASSPAQY KASTVTQGSH NKACTMLFMV LYFFTMAGSV WWVILTITWF LAAVPKWGSE AIEKKALLFH ASAWGIPGTL TIILLAMNKI EGDNISGVCF VGLYDVDALR YFVLAPLCLY VVVGVSLLLA GIISLNRVRI EIPLEKENQD KLVKFMIRIG VFSILYLVPL LVVIGCYFYE QAYRGIWETT WIQERCREYH IPCPYQVTQM SRPDLILFLM KYLMALIVGI PSIFWVGSKK TCFEWASFFH GRRKKEIVNE SRQVLQEPDF AQSLLRDPNT PIIRKSRGTS TQGTSTHASS TQLAMVDDQR SKAGSVHSKV SSYHGSLHRS RDGRYTPCSY RGMEERLPHG SMSRLTDHSR HSSSHRLNEQ SRHSSIRDLS NNPMTHITHG TSMNRVIEED GTSA **Sequence without tag. Tag location is at the discretion of the manufacturer. If you have a**

	special request, please contact us.
Characteristics:	• Made in Germany - from design to production - by highly experienced protein experts. • Mouse Fzd3 Protein (raised in Insect Cells) purified by multi-step, protein-specific process to ensure crystallization grade. • State-of-the-art algorithm used for plasmid design (Gene synthesis). This protein is a made to order protein and will be made for the first time for your order. Our experts in the lab will ensure that you receive a correctly folded protein. The big advantage of ordering our made-to-order proteins in comparison to ordering custom made proteins from other companies is that there is no financial obligation in case the protein cannot be expressed or purified. In the unlikely event that the protein cannot be expressed or purified we do not charge anything (other companies might charge you for any performed steps in the expression process for custom-made proteins, e.g. fees might apply for the expression plasmid, the first expression experiments or purification optimization). When you order this made-to-order protein you will only pay upon receival of the correctly folded protein. With no financial risk on your end you can rest assured that our experienced protein experts will do everything to make sure that you receive the protein you ordered. The concentration of our recombinant proteins is measured using the absorbance at 280nm. The protein's absorbance will be measured in several dilutions and is measured against its specific reference buffer. The concentration of the protein is calculated using its specific absorption coefficient. We use the Expasy's protparam tool to determine the absorption coefficient of each protein.
Purification:	Three step purification of membrane proteins expressed in baculovirus infected SF9 insect cells: 1. Membrane proteins are fractioned by ultracentrifugation and subsequently solubilized with different detergents (detergent screen). Samples are analyzed by Western blot. 2. The best performing detergent is used for solubilization and the proteins are purified via their rho1D4 tag via two rho1D4 antibody columns: one DTT resistant, the other one not. Eluate fractions are analyzed by Western blot. 3. Protein containing fractions of the best purification are subjected to second purification step through size exclusion chromatograph. Eluate fractions are analyzed by SDS-PAGE and Western blot.
Purity:	>95 % as determined by SDS PAGE, Size Exclusion Chromatography and Western Blot.
Sterility:	0.22 µm filtered
Endotoxin Level:	Protein is endotoxin-free.

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Product Details

Grade:	Crystallography grade

Target Details

Target:	FZD3
Alternative Name:	Fzd3 (FZD3 Products)
Background:	Receptor for Wnt proteins. Most of frizzled receptors are coupled to the beta-catenin canonical signaling pathway, which leads to the activation of disheveled proteins, inhibition of GSK-3 kinase, nuclear accumulation of beta-catenin and activation of Wnt target genes. 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. Activation by Wnt5A stimulates PKC activity via a G-protein-dependent mechanism. Involved in transduction and intercellular transmission of polarity information during tissue morphogenesis and/or in differentiated tissues. Plays a role in controlling early axon growth and guidance processes necessary for the formation of a subset of central and peripheral major fiber tracts. Required for the development of major fiber tracts in the central nervous system, including: the anterior commissure, the corpus callosum, the thalamocortical, corticothalamic and nigrostriatal tracts, the corticospinal tract, the fasciculus retroflexus, the mammillothalamic tract, the medial lemniscus, and ascending fiber tracts from the spinal cord to the brain. In the peripheral nervous system, controls axon growth in distinct populations of cranial and spinal motor neurons, including the facial branchimotor nerve, the hypoglossal nerve, the phrenic nerve, and motor nerves innervating dorsal limbs. Involved in the migration of cranial neural crest cells. May also be implicated in the transmission of sensory information from the trunk and limbs to the brain. Controls commissural sensory axons guidance after midline crossing along the anterior-posterior axis in the developing spinal cord in a Wnt-dependent signaling pathway. Together with FZD6, is involved in the neural tube closure and plays a role in the regulation of the establishment of planar cell polarity (PCP), particularly in the orientation of asymmetric bundles of stereocilia on the apical faces of a subset of auditory and vestibular sensory cells located in the inner ear. Promotes neurogenesis by maintaining sympathetic neuroblasts within the cell cycle in a beta-catenin-dependent manner. {ECO:0000269|PubMed:12351730, ECO:0000269|PubMed:14671310, ECO:0000269|PubMed:16407530, ECO:0000269|PubMed:16495441, ECO:0000269|PubMed:21325504, ECO:0000269|PubMed:24347548, ECO:0000269|PubMed:24799694}.

Target Details

Molecular Weight:	74.9 kDa Including tag.
UniProt:	Q61086
Pathways:	WNT Signaling, Tube Formation

Application Details

Application Notes:	In addition to the applications listed above we expect the protein to work for functional studies as well. As the protein has not been tested for functional studies yet we cannot offer a gurantee though.
Comment:	Protein has not been tested for activity yet. In cases in which it is highly likely that the recombinant protein with the default tag will be insoluble our protein lab may suggest a higher molecular weight tag (e.g. GST-tag) instead to increase solubility. We will discuss all possible options with you in detail to assure that you receive your protein of interest.
Restrictions:	For Research Use only

Handling

Format:	Liquid
Buffer:	100 mM NaCL, 20 mM Hepes, 10% glycerol. pH value is at the discretion of the manufacturer.
Handling Advice:	Avoid repeated freeze-thaw cycles.
Storage:	-80 °C
Storage Comment:	Store at -80°C.
Expiry Date:	Unlimited (if stored properly)

Image 1. „Crystallography Grade“ protein due to multi-step, protein-specific purification process

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