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Datasheet for ABIN3096291  
**FLT4 Protein (AA 797-1363) (His tag)**

### Overview

|                               |  |
|-------------------------------|--|
| Quantity:                     | 1 mg   |
| Target:                       | FLT4   |
| Protein Characteristics:      | AA 797-1363  |
| Origin:                       | Human  |
| Source:                       | Insect Cells   |
| Protein Type:                 | Recombinant  |
| Purification tag / Conjugate: | This FLT4 protein is labelled with His tag.                          |
| Application:                  | SDS-PAGE (SDS), Western Blotting (WB), ELISA, Crystallization (Crys) |

### Product Details

Sequence: FCNMRRPAHA DIKTGYLSII MDPGEVPLEE QCEYLSYDAS QWEFPRERLH LGRVLYGYGAF  
GKVVEASAFG IHKGSSCDTV AVKMLKEGAT ASEHRALMSE LKILIHIGNH LNVVNLLGAC  
TKPQGPLMVI VEFCKYGNLS NFLRAKRDAF SPCAEKSPEQ RGRFRAMVEL ARLDRRRPGS  
SDRVLFARFS KTEGGARRAS PDQEAEDLWL SPLTMEDLVC YSFQVARGME FLASRKCIHR  
DLAARNILLS ESDVVKICDF GLARDIYKDP DYVRKGSARL PLKWMAPESI FDKVYTTQSD  
VWSFGVLLWE IFSLGASPYP GVQINEEFCQ RLRDGTRMRA PELATPAIRR IMLNCWSGDP  
KARPAFSELV EILGDLLQGR GLQEEEEVCM APRSSQSSEE GSFSQVSTMA LHIAQADAED  
SPPSLQRHSL AARYYNWVSF PGCLARGAET RGSSRMKTFE EFPMTPTTYK GSVDNQTD SG  
MVLASEEF EQ IESRHRQESG FSCKGPGQNV AVTRAHPDSQ GRRRRPERGA RGGQVFYNSE  
YGELSEPSEE DHCSPSARVT FFFDNSY

**Sequence without tag. Tag location is at the discretion of the manufacturer. If you have a special request, please contact us.**

## Product Details

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- Characteristics:
- Made in Germany - from design to production - by highly experienced protein experts.
  - Human FLT4 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 receipt 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.

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- Purification:
- Two step purification of proteins expressed in baculovirus infected SF9 insect cells:
1. In a first purification step, the protein is purified from the cleared cell lysate using three different His-tag capture materials: high yield, EDTA resistant, or DTT resistant. Eluate fractions are analyzed by SDS-PAGE.
  2. Protein containing fractions of the best purification are subjected to second purification step through size exclusion chromatography. Eluate fractions are analyzed by SDS-PAGE and Western blot.

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Purity: >95 % as determined by SDS PAGE, Size Exclusion Chromatography and Western Blot.

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Sterility: 0.22 µm filtered

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Endotoxin Level: Protein is endotoxin free.

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Grade: Crystallography grade

## Target Details

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Target: FLT4

Alternative Name: FLT4 ([FLT4 Products](#))

Background: Tyrosine-protein kinase that acts as a cell-surface receptor for VEGFC and VEGFD, and plays an essential role in adult lymphangiogenesis and in the development of the vascular network and the cardiovascular system during embryonic development. Promotes proliferation, survival and migration of endothelial cells, and regulates angiogenic sprouting. Signaling by activated FLT4 leads to enhanced production of VEGFC, and to a lesser degree VEGFA, thereby creating a positive feedback loop that enhances FLT4 signaling. Modulates KDR signaling by forming heterodimers. The secreted isoform 3 may function as a decoy receptor for VEGFC and/or VEGFD and play an important role as a negative regulator of VEGFC-mediated lymphangiogenesis and angiogenesis. Binding of vascular growth factors to isoform 1 or isoform 2 leads to the activation of several signaling cascades, isoform 2 seems to be less efficient in signal transduction, because it has a truncated C-terminus and therefore lacks several phosphorylation sites. Mediates activation of the MAPK1/ERK2, MAPK3/ERK1 signaling pathway, of MAPK8 and the JUN signaling pathway, and of the AKT1 signaling pathway. Phosphorylates SHC1. Mediates phosphorylation of PIK3R1, the regulatory subunit of phosphatidylinositol 3-kinase. Promotes phosphorylation of MAPK8 at 'Thr-183' and 'Tyr-185', and of AKT1 at 'Ser-473'. {ECO:0000269|PubMed:11532940, ECO:0000269|PubMed:15102829, ECO:0000269|PubMed:15474514, ECO:0000269|PubMed:16076871, ECO:0000269|PubMed:16452200, ECO:0000269|PubMed:17210781, ECO:0000269|PubMed:19610651, ECO:0000269|PubMed:19779139, ECO:0000269|PubMed:20224550, ECO:0000269|PubMed:20431062, ECO:0000269|PubMed:20445537, ECO:0000269|PubMed:21273538, ECO:0000269|PubMed:7675451, ECO:0000269|PubMed:8700872, ECO:0000269|PubMed:9435229}.

Molecular Weight: 64.5 kDa Including tag.

UniProt: [P35916](#)

Pathways: [RTK Signaling, Signaling Events mediated by VEGFR1 and VEGFR2, VEGF Signaling](#)

## Application Details

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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 guarantee though.

## Application Details

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Comment: 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.

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Restrictions: For Research Use only

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## Handling

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Format: Liquid

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Buffer: 100 mM NaCL, 20 mM Hepes, 10% glycerol. pH value is at the discretion of the manufacturer.

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Handling Advice: Avoid repeated freeze-thaw cycles.

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Storage: -80 °C

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Storage Comment: Store at -80°C.

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Expiry Date: Unlimited (if stored properly)

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