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Datasheet for ABIN3114326
TAP1 Protein (AA 1-808) (rho-1D4 tag)

Overview

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| Quantity: | 1 mg |
| Target: | TAP1 |
| Protein Characteristics: | AA 1-808 |
| Origin: | Human |
| Source: | Insect Cells |
| Protein Type: | Recombinant |
| Purification tag / Conjugate: | This TAP1 protein is labelled with rho-1D4 tag. |
| Application: | Western Blotting (WB), SDS-PAGE (SDS), ELISA, Crystallization (Crys) |

Product Details

Sequence: MAELLASAGS ACSWDFPRAP PSFPPPAASR GGLGGTRSFR PHRGAESPRP GRDRDGVRVP
MASSRCPAPR GCRCLPGASL AWLGTVLLLL ADWVLLRTAL PRIFSLLVPT ALPLLRVWAV
GLSRWAVLWL GACGVL RATV GSKSENAGA Q GWLAALKPLA AALGLALPGL ALFRELI SWG
APGSADSTRL LHWGSHPTAF VVS YAAALPA AALWHKLGSL WVPGGQGGSG NPVRRLLGCL
GSETRRLSLF LVLVVLSSLG EMAIPFFTGR LTDWILQDGS ADTFTRNLTL MSILTIA SAV
LEFVG DGIYN NTMGHVHSHL QGEVFGAVLR QETEFFQQNQ TGNIMSRVTE DTSTLSDSL S
ENLSLFLWYL VRGLCLLGIM LWGSVSLTMV TLITLPLLFL LPKKV GKWYQ LLEVQVRESL
AKSSQVAIEA LSAMPTVRSF ANEEGEAQKF REKLQEI KTL NQKEAVAYAV NSWTTSISGM
LLKVGILYIG GQLVTSGAVS SGNLVTFLVY QMQFTQAVEV LLSIYPRVQK AVGSSEKIFE
YLDRTPRCPP SGLLTPLHLE GLVQFQDV SF AYPNRPDVLV LQGLTFTLRP GEVTALVGP N
GSGKSTVAAL LQNL YQPTGG QLLLDGKPLP QYEHRYLHRQ VAAVGQEPQV FGRSLQENIA
YGLTQKPTME EITAAAVKSG AHSFISGLPQ GYDTEVDEAG SQLSGGQRQA VALARALIRK

PCVLILDDAT SALDANSQLQ VEQLLYESPE RYSRSVLLIT QHLSLVEQAD HILFLEGGAI
REGGTHQQLM EKKGCYWAMV QAPADAPE

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.
- Human TAP1 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.

Purification:

Three step purification of membrane proteins expressed in baculovirus infected SF9 insect cells:

1. Membrane proteins are fractionated 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.

Product Details

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| Sterility: | 0.22 µm filtered |
| Endotoxin Level: | Protein is endotoxin-free. |
| Grade: | Crystallography grade |

Target Details

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| Target: | TAP1 |
| Alternative Name: | TAP1 (TAP1 Products) |
| Background: | <p>Involved in the transport of antigens from the cytoplasm to the endoplasmic reticulum for association with MHC class I molecules. Also acts as a molecular scaffold for the final stage of MHC class I folding, namely the binding of peptide. Nascent MHC class I molecules associate with TAP via tapasin. Inhibited by the covalent attachment of herpes simplex virus ICP47 protein, which blocks the peptide-binding site of TAP. Inhibited by human cytomegalovirus US6 glycoprotein, which binds to the luminal side of the TAP complex and inhibits peptide translocation by specifically blocking ATP-binding to TAP1 and prevents the conformational rearrangement of TAP induced by peptide binding. Inhibited by human adenovirus E3-19K glycoprotein, which binds the TAP complex and acts as a tapasin inhibitor, preventing MHC class I/TAP association. Expression of TAP1 is down-regulated by human Epstein-Barr virus vIL-10 protein, thereby affecting the transport of peptides into the endoplasmic reticulum and subsequent peptide loading by MHC class I molecules.</p> |
| Molecular Weight: | 88.4 kDa Including tag. |
| UniProt: | Q03518 |
| Pathways: | Regulation of Leukocyte Mediated Immunity , Positive Regulation of Immune Effector Process |

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. |
| 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. |
| Restrictions: | For Research Use only |

Handling

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| 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) |