abcam

## Product datasheet

# Recombinant Human CLSTN1 protein ab182805

### Description

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| **Product name** | Recombinant Human CLSTN1 protein |
| **Purity** | > 90 % SDS-PAGE.<br>ab182805 is expressed in E.coli as inclusion bodies. The final product was refolded and chromatographically purified. |
| **Expression system** | Escherichia coli |
| **Accession** | O94985 |
| **Protein length** | Protein fragment |
| **Animal free** | No |
| **Nature** | Recombinant |
| **Species** | Human |
| **Sequence** | MASMTGGQQMGRGHHHHHHGNLYFQGGEFARVNKHKP<br>WLEPTYHGIVTEN<br>DNTVLLDPPLIALDKDAPLRFAESFEVTVTKEGEICGFKIH<br>GQNVPFDAV<br>VVDKSTGEGVIRSKEKLDCELQKDYSFTIQAYDCGKGPDG<br>TNVKKSHKAT<br>VHIQVNDVNEYAPVFKEKSYKATVIEGKQYDSILRVEAVDA<br>DCSPQFSQI<br>CSYEIITPDVPFTVDKDGYIKNTEKLNYGKEHQYKLTVTAYD<br>CGKKRATE<br>DVLVKISIKPTCTPGWQGWNNRIEYEPGTGALAVFPNIHLE<br>TCDEPVASV<br>QATVELETSHIGKGCDRDTYSEKSLHRLCGAAAGTAELLP<br>SPSGSLNWTM<br>GLPTDNGHDSDQVFEFNGTQAVRIPDGVVSVSPKEPFTIS<br>VWMRHGPFGR<br>KKETILCSSDKTDMNRHHYSLYVHGCRLIFLFRQDPSEEK<br>KYRPAEFHWK<br>LNQVCDEEWHHYVLNVEFPSVTLYVDGTSHEPFSVTEDY<br>PLHPSKIETQL<br>VVGACWQEFSGVENDNETEPVTVASAGGDLHMTQFFRG<br>NLAGLTLRSGKL<br>ADKKVIDCLYTCKEGLDLQVLEDSGRGVQIQAHPSQLVLT<br>LEGEDLGELD<br>KAMQHISYLNSRQFPTPGIRRLKITSTIKCFNEATCISVPPVD |

GYVMVLQ
PEEPKISLSGVHHFARAASEFESSEGVFLFPELRIISTITRE
VEPEGDGA
EDPTVQESLVSEEIVHDLDTCEVTVEGEELNHEQESLEV
DMARLQQKGIE
VSSSELGMTFTGVDTMASYEEVLHLLRYRNWHARSLLDR
KFKLICSELNG
RYISNEFKVEVNVIHTANPMEHANHMAAQPQFVHPEHRSF
VDLSGHNLAN PHPFAVVPST

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| **Predicted molecular weight** | 96 kDa including tags |
| **Amino acids** | 29 to 859 |
| **Tags** | His-T7 tag N-Terminus |
| **Additional sequence information** | The extracellular domain of CLSTN1 constructed with codon optimization and expressed with a small T7-His-TEV cleavage site Tag (29aa) fusion at its N-terminal. NP_055759. |

## Specifications

Our **Abpromise guarantee** covers the use of **ab182805** in the following tested applications.

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

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| **Applications** | SDS-PAGE |

## Preparation and Storage

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| **Stability and Storage** | Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -80°C. Avoid freeze / thaw cycle.<br>pH: 8.00<br>Constituent: 0.32% Tris HCl<br><br>Buffer also contains NaCl, KCl, EDTA, arginine, DTT and Glycerol. |

## General Info

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| **Function** | Induces KLC1 association with vesicles and functions as a cargo in axonal anterograde transport. Complex formation with APBA2 and APP, stabilizes APP metabolism and enhances APBA2-mediated suppression of beta-APP40 secretion, due to the retardation of intracellular APP maturation. In complex with APBA2 and C99, a C-terminal APP fragment, abolishes C99 interaction with PSEN1 and thus APP C99 cleavage by gamma-secretase, most probably through stabilization of the direct interaction between APBA2 and APP. The intracellular fragment AlcICD suppresses APBB1-dependent transactivation stimulated by APP C-terminal intracellular fragment (AICD), most probably by competing with AICD for APBB1-binding. May modulate calcium-mediated postsynaptic signals. |
| **Tissue specificity** | Expressed in the brain and, a lower level, in the heart, skeletal muscle, kidney and placenta. Accumulates in dystrophic neurites around the amyloid core of Alzheimer disease senile plaques (at protein level). |
| **Sequence similarities** | Contains 2 cadherin domains. |
| **Domain** | The cytoplasmic domain is involved in interaction with APBA2, as well as the binding of synaptic |

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| | Ca(2+). |
| **Post-translational modifications** | Proteolytically processed under normal cellular conditions. A primary zeta-cleavage generates a large extracellular (soluble) N-terminal domain (sAlc) and a short C-terminal transmembrane fragment (CTF1). A secondary cleavage catalyzed by presenilin gamma-secretase within the transmembrane domain releases the beta-Alc-alpha chain in the extracellular milieu and produces an intracellular fragment (AlcICD). This processing is strongly suppressed in the tripartite complex formed with APBA2 and APP, which seems to prevent the association with PSEN1. |
| **Cellular localization** | Endoplasmic reticulum membrane. Golgi apparatus membrane. Cell projection. Cell junction > synapse > postsynaptic cell membrane. Nucleus. Neurite tips. Localized in the postsynaptic membrane of both excitatory and inhibitory synapses (By similarity). The AlcICD fragment is translocated to the nucleus upon interaction with APBB1. |



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