# 重组人SYT7蛋白

Recombinant SYT7 protein (His tag)

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| **目录号 Catalog Number** | 537229 |
| **同用名 Synonyms** | IPCA-7; Prostate cancer-associated protein 7; Synaptotagmin VII; SytVII |
| **种属 Species** | Human |
| **表达系统 Expression System** | E. coli |
| **蛋白编号 Accession** | O43581 |
| **分子量 Molecular Weight** | Predictes a molecular mass of 32.83 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 35 kDa band. |

## 产品信息

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| **氨基酸序列 Amino Acid Sequence** | MNHKVNLGRI QFSVGYNFQE STLTVKIMKA QELPAKDFSG TSDPFVKIYL LPDKKHKLET KVKRKNLNPH WNETFLFEGF PYEKVVQRIL YLQVLDYDRF SRNDPIGEVS IPLNKVDLTQ MQTFWKDLKP CSDGSGSRGE LLLSLCYNPS ANSIIVNIIK ARNLKAMDIG GTSDPYVKVW LMYKDKRVEK KKTVTMKRNL NPIFNESFAF DIPTEKLRET TIIITVMDKD KLSRNDVIGK IYLSWKSGPG EVKHWKDMIA RPRQPVAQWH QLKALEHHHH HH |
| **性状 Form** | 冻干粉末 Lyophilized powder |
| **组分 Formulation** | Lyophilized from sterile PBS, pH 7.4 |
| **纯度 Purity** | >85%, by SDS-PAGE with Coomassie Brilliant Blue staining. |
| **内毒素 Endotoxin** | Not tested. |
| **活性 Activity** | Not tested. |
| **稳定性 Stability** | Samples are stable for up to twelve months from date of receipt at -70℃ |
| **蛋白构建 Protein Construction** | DNA encoding 135-403 aa (O43581) were fused with C-terminal 6His tag. |

## 保存与运输

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| **复溶 Reconstitution** | Reconstitute at 0.25 μg/μl in sterile water for short-term storage. Reconstitution with 50% glycerol solution is recommended for longer term storage (see Stability and Storage for more details). If a different concentration is needed for your purposes please adjust the reconstitution volume as required (please note: the ion concentration of the final solution will vary according to the volume used). Note: Centrifuge vial before opening. When reconstituting, gently pipet and wash down the sides of the vial to ensure full recovery of the protein into solution. |
| **储存 Storage** | Store it under sterile conditions at -20℃ to -80℃. It is recommended that the protein be aliquoted for optimal storage. Avoid repeated freeze-thaw cycles. |
| **运输 Shipping** | In general, recombinant proteins are provided as lyophilized powder which are shipped at ambient temperature.<br>Bulk packages of recombinant proteins are provided as frozen liquid. They are shipped out with blue ice unless customers require otherwise. |

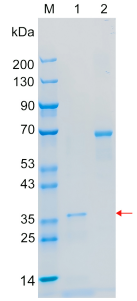
## 功能描述

**研究背景 Background**

Recombinant Human Synaptotagmin-7 (SYT7) Fragment (aa 135-403) is a high-purity protein encompassing both C2 domains (C2-1 and C2-2), essential for calcium and phospholipid binding. This fragment serves as an ideal tool for investigating $Ca^{2+}$-dependent exocytosis, membrane fusion mechanisms, and synaptic facilitation in neurological and secretory research applications. Synaptotagmin-7 (SYT7) is a high-affinity calcium sensor that plays a critical role in $Ca^{2+}$-triggered exocytosis of synaptic vesicles, lysosomes, and secretory granules. It regulates key processes including synaptic facilitation, plasma membrane repair, phagocytosis, bone remodeling, and hormone secretion by binding to phospholipid membranes and SNARE complexes via its C2 domains. The protein localizes to multiple membranes including the presynaptic membrane, synaptic vesicles, lysosomes, phagosomes, and peroxisomes, with its lysosomal targeting dependent on N-terminal palmitoylation and CD63 interaction. Its involvement in Trypanosoma cruzi cell invasion and cholesterol transport between organelles further highlights its multifunctional significance in cellular physiology.

## 验证数据

**SDS-PAGE**




Recombinant SYT7 protein (His tag) SDS-PAGE
M: Marker; Lane 1: SYT7; Lane 2: BSA