# Recombinant SAMTR protein (His tag)

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| **Catalog Number** | 538139 |
| **Synonyms** | Probable methyltransferase BMT2 homolog |
| **Species** | Human |
| **Expression System** | E. coli |
| **Accession** | Q1RMZ1 |
| **Molecular Weight** | Predictes a molecular mass of 25.90 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 26 kDa band. |

## Product Information

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| **Sequence Region** | 164-373 |
| **Form** | Lyophilized powder |
| **Formulation** | Lyophilized from sterile PBS, pH 7.4 |
| **Purity** | >90%, by SDS-PAGE with Coomassie Brilliant Blue staining. |
| **Endotoxin** | Not tested. |
| **Activity** | Not tested. |
| **Stability** | Samples are stable for up to twelve months from date of receipt at -70℃ |
| **Protein Construction** | DNA encoding 164-373 aa (Q1RMZ1) were fused with 6His tag. |

## Storage & Handling

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| **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. |
| **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. |
| **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. |

## Description

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| **Description** | Recombinant Human SAMTOR Protein Fragment (aa 164-373) - A highly stable and soluble fragment of the S-adenosylmethionine sensor upstream of mTORC1, ideal for structural studies and biochemical characterization of methionine sensing mechanisms in mTORC1 signaling pathways.<br>SAMTOR (S-adenosylmethionine sensor upstream of mTORC1) is a crucial regulatory protein that functions as a sensor of S-adenosyl-L-methionine to signal methionine sufficiency to the mTORC1 signaling pathway. In the presence of methionine, SAMTOR binds S-adenosyl-L-methionine, disrupting its interaction with the GATOR1 and KICSTOR complexes and promoting mTORC1 signaling. During methionine starvation, reduced S-adenosyl-L-methionine levels promote SAMTOR's association with GATOR1 and KICSTOR, leading to inhibition of mTORC1 signaling. The protein may also function as a S-adenosyl-L-methionine-dependent methyltransferase. This regulatory mechanism positions SAMTOR as a key metabolic sensor linking methionine availability to cellular growth signaling through the mTORC1 pathway. |