Recombinant E2F1 protein (His tag)

Catalog Number	542532
Synonyms	E2F-1; PBR3; Retinoblastoma-associated protein 1; RBAP-1; Retinoblastoma-binding protein 3; RBBP-3; pRB-binding protein E2F-1
Species	Human
Expression System	E. coli
Accession	Q01094
Molecular Weight	Predictes a molecular mass of 21.30 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 22 kDa band.

Product Information

Sequence Region	127-300
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>85%, 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 127-300 aa (Q01094) were fused with 6His tag.

Storage & Handling

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. Bulk packages of recombinant proteins are provided as frozen liquid. They are shipped out with blue ice unless customers require otherwise.

Description

Description	Recombinant Human E2F1 Fragment (127-300) is a high-quality, stable protein fragment derived from the Transcription factor E2F1, a key regulator of cell cycle progression and gene expression. This 174-amino acid fragment is engineered for optimal solubility and stability, making it ideal for structural studies, biochemical assays, and functional analyses in life science research. Transcription factor E2F1 is a critical DNA-binding protein in Homo sapiens that functions as a transcription activator by cooperatively binding with DP proteins to E2 recognition sites in promoter regions. It plays a central role in controlling cell cycle progression from G1 to S phase, regulating genes involved in DNA replication and cell proliferation. E2F1 also mediates TP53/p53-dependent apoptosis and has been shown to block adipocyte differentiation by repressing CEBPA binding, while directly activating transcription of genes such as PEG10 and RRP1B. The protein is localized in the nucleus, where it interacts with retinoblastoma-associated protein 1 (RB1) in a cell-cycle-dependent manner. This fragment (residues 127-300) was selected based on computational predictions to provide a stable, soluble unit for research applications, enabling detailed investigation of E2F1's molecular mechanisms without the complexities of the full-length protein.