

## Product Data Sheet

Product Name: DDX5 Protein, Human (His, Myc)  
 Cat. No.: GC27030  
 Batch No.: 1

### Product Data

Purity >98%

Physical Appearance solid

Synonyms DDX5 [ ]; ATP dependent RNA helicase DDX5; DDX 5; Ddx5

Amino Acid Sequence MSGYSSDRDRGRDRGFGAPRFGGSRAGPLSGKKFGNPGKLVKKKWNLDLDPKFEKNFYQEHPDLARRTAQEVETYYRRSKEITVRGHNCPKPVLNIFYE

Formulation Lyophilized from a 0.22 μm filtered solution of 10 mM Tris-HCl, 1 mM EDTA, 6% Trehalose, pH 8.0 or PBS, pH 7.4, 8% trehalose.

### Introduction

DDX5 Protein, Human (His, Myc) is the recombinant human-derived DDX5, expressed by E. coli, with N-10\*His, C-Myc labeled tag. DDX5 is an RNA helicase involved in the alternative regulation of pre-mRNA splicing, where its helicase activity promotes tau exon 10 inclusion in an RBM4-dependent manner. It binds to the stem-loop region downstream of exon 10 in tau pre-mRNA, with ATP hydrolysis rates highly stimulated by single-stranded RNA. Beyond splicing, DDX5 participates in transcription regulation (independent of helicase activity), acting as a coactivator for androgen receptor AR (but not ESR1) and synergizing with DDX17 and SRA1 RNA to activate MYOD1 transcriptional activity during skeletal muscle differentiation. It also serves as a coactivator for p53/TP53 in DNA damage response and apoptosis, and for RUNX2 in osteoblast differentiation. Additionally, DDX5 exhibits promoter-specific transcriptional repression likely through HDAC1 interaction, and as part of a PER complex, inhibits 3' transcriptional termination of circadian genes like PER1 and NR1D1 to modulate circadian rhythms.

### Biological Activity

Measured by its binding ability in a functional ELISA. Immobilized Human DDX5 at 2.5 μg/mL (100 μL/well) on the plate can bind Anti-DDX5 Antibody. The ED<sub>50</sub> for this effect is 36.69 ng/mL.

### Stability

Stored at -20°C for 2 years from date of receipt. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.

### Background

DDX5 [ ], Human (His, Myc) [ ] DDX5 [ ] E. coli [ ] N-10\*His, C-Myc [ ]

DDX5 [ ] pre-mRNA [ ] RNA [ ] RBM4 [ ] tau [ ] 10 [ ] tau pre-mRNA [ ] 10 [ ] RNA [ ] ATP [ ] AR [ ] ESR1 [ ] DDX17 [ ] SRA1 RNA [ ] MYOD1 [ ] p53/TP53 [ ] DNA [ ] RUNX2 [ ] DDX5 [ ] HDAC1 [ ] PER [ ] PER1 [ ] NR1D1 [ ] 3' [ ]

**Caution: Product has not been fully validated for medical applications. For research use only.**

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