



**LD Biopharma, Inc.**  
9924 Mesa Rim Road Suite B  
San Diego, CA 92121  
Tel: 858-876-8266  
<http://www.ldbiopharma.com>

## - PRODUCT DATA SHEET -

**Name of Product:** Recombinant Human DCAF7 Protein  
**Catalog Number:** hRP-0735  
**Manufacturer:** LD Biopharma, Inc.

### Introduction

WDR68 (WD-repeat protein 68) was originally identified in petunia as a gene (AN11) responsible in a locus that controls the pigmentation of flowers by stimulating the transcription of anthocyanin biosynthetic genes. Evolutionarily conserved orthologs have been identified in many other species, including human that do not produce anthocyanin [26]. The amino acid sequence of human AN11 (HAN11) is 100% identical with that of monkey, mouse, rat, dog, cow, and even chicken. AN11 and its orthologs all encode a protein with five WD40-repeats and are therefore termed collectively as WDR68. WDR68 is also referred as DCAF7, one of Ddb1- and Cul4-associated factors. In general, WD40 domains are believed to facilitate interaction with other proteins, consistent with the observation that many of WD40-repeat proteins are found in multi-protein complexes. All the evidence suggests that DCAF7 plays a fundamental role in many species from plants to mammals, probably by protein-protein interactions. Recent data indicated that DCAF7 specific interacts with DYRK1a kinase, which is encoded in the Down's syndrome critical region in chromosome 21.

Full-length human DCAF7 (342 aa) gene was constructed with 15 N-terminal T7 tag and expressed in E.coli as inclusion bodies, refolded using our unique "temperature shift inclusion body refolding" technology and chromatographically purified.

**Gene Symbol:** DCAF7 (AN11; HA11; SWAN-1; WDR68)  
**Accession Number:** NP\_005819  
**Species:** Human  
**Size:** 50 µg / Vial  
**Composition:** 0.5 mg/ml, sterile-filtered, in 20 mM pH 8.0 Tris-HCl Buffer, with proprietary formulation of NaCl, KCl, EDTA, sucrose and DTT.  
**Storage:** In Liquid. Keep at -20°C for long term storage. Product is stable at 4 °C for at least 30 days.



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## Key References

Ritterhoff, S. et al., *The WD40-repeat protein Han11 functions as a scaffold protein to control HIPK2 and MEKK1 kinase functions.* EMBO J. 29 (22), 3750-3761 (2010)

Miyata, Y. et al., *DYRK1A binds to an evolutionarily conserved WD40-repeat protein WDR68 and induces its nuclear translocation.* Biochim. Biophys. Acta 1813 (10), 1728-1739 (2011)

Bouwmeester, T., et al., *A physical and functional map of the human TNF-alpha/NF-kappa B signal transduction pathway.* Nat. Cell Biol. 6 (2), 97-105 (2004)

## Applications

1. May be used for in vitro DYRK1 activity regulations study for neuronal cell differentiation using recombinant DCAF7 protein intracellular delivery method.
2. May be used as enzymatic substrate protein for Kinase, ubiquitin assay.
3. May be used for mapping DCAF7 protein binding partner in protein-protein interaction assay in B cells.
4. May be used as antigen for specific antibody development.

## Quality Control

1. Purity: > 90% by SDS-PAGE.

## Recombinant Protein Sequence

MASMTGGQQMGRGEFSLHGKRKEIYKYEAPWTVYAMNWSVRPDKRFRLLALGSFVEEYNNKVQLV  
GLDEESSEFICRNTFDHPYPTTKLMWIPDTKGVYPDLLATSGDYLRVWRVGETETRLECLLNNN  
KNSDFCAPLTSFDWNEVDPYLLGTSSIDTTCTIWGLETGQVLGRVNLVSGHVKTQLIAHDKEYV  
DIAFSRAGGGRDMFASVGADGSVRMFDLRHLEHSTIIYEDPQHHPLLRCLWKNQDPNYLATMAM  
DGMEVVILDVRVPCPTPVARLNNHRACVNGIAWAPHSSCHICTAADDHQALIWDIQQMPRAIEDP  
ILAYTAEGEINNVQWASTQPDWIAICYNNCLEILRV