DCAF5/DDB1/DDA1/Rbx1/CUL4B Complex Recombinant

Catalog: 102471
Lot: 241028-B

Product Information

Description:	Recombinant complex of full length human DCAF5 (DDB1 and CUL4 associated factor 5), amino acids 2-942(end), DBB1 (damage specific DNA binding protein 1), amino acids 2-1140(end), DDA1 (DET1 and DDB1 associated 1), amino acids 2-102(end), Rbx1 (ring-box 1), amino acids 2-108(end), and CUL4B (cullin 4B), amino acids 3-913(end). DCAF5, DBB1, and DDA1 contain an N-terminal FLAG-tag. Rbx1 contains the M5I mutation and contains an N-terminal His-tag (6xHis). CUL4B contains an N-terminal His-tag (6xHis). These recombinant proteins are co-expressed in a HEK293 expression system and affinity purified as a complex.
Background:	Covalent conjugation to ubiquitin (Ub) is a major post-translational modification regulating protein stability, function, and localization. Ubiquitination is the concerted action of three enzymes: a Ub-activating enzyme (E1), a Ub-conjugating enzyme (E2), and a Ub ligase (E3), which directs the last step of the Ub-conjugating cascade by binding to both an E2~Ub conjugate and a substrate protein. This step ensures the transfer of Ub from E2~Ub to the substrate, leading to its mono- or poly-ubiquitination. DCAF5 (DDB1 and CUL4 associated factor 5) is a substrate receptor for the CUL4-DDB1 E3 ubiquitin-protein ligase complex (CRL4). Furthermore, DCAF5 is involved in the ubiquitination of SOX2 (SRY-box 2), DNMT1 (DNA methyltransferase 1), and E2F1 (early region 2 factor 1). Studies have found DCAF5 to be a quality control factor in SWI/SNF (SWItch/Sucrose Non-Fermentable) chromatin-remodeling complexes, the degradation of which leads to SMARCB1-mutant cancers. Therefore, DCAF5 is an attractive potential drug target for cancer therapy.
Species:	Human
Construct:	DCAF5 (FLAG-2-942(end)) / DDB1 (FLAG-2-1140(end)) / DDA1 (FLAG-2-102(end)) / Rbx1 (M5I) (His-2-108(end)) / CUL4B (His-3-913(end))
Mutation:	Rbx1: M5I
Concentration:	0.39 mg/ml
Expression System:	HEK293
Purity:	60%
Format:	Aqueous buffer solution.
Formulated In:	40 mM Tris-HCl pH 8.0, 110 mM NaCl, 2.2 mM KCl, and 10% glycerol
MW:	DDB1: 128 kDa; CUL4B: 105 kDa; DCAF5: 105 kDa; DDA1: 13 kDa; Rbx1: 13 kDa
Genbank Accession:	DDB1: NM_001923; CUL4B: NM_003588.4; DCAF5: NM_003861.3; DDA1: NM_024050.6; Rbx1: NM_014248
Stability:	At least 6 months at -80°C.
Storage:	-80°C
Instructions for Use:	Thaw on ice and gently mix prior to use. DO NOT VORTEX. Perform a quick spin before opening. Aliquot into small volumes and flash freeze for long term storage. Avoid multiple freeze/thaw cycles.
Assay Conditions:	Assay was performed according to DCAF5 Intrachain TR-FRET Assay Kit (BPS Bioscience #82869) with DCAF5 complex at various concentrations.
Applications:	Useful for the study of enzyme kinetics, screening inhibitors, and selectivity profiling.

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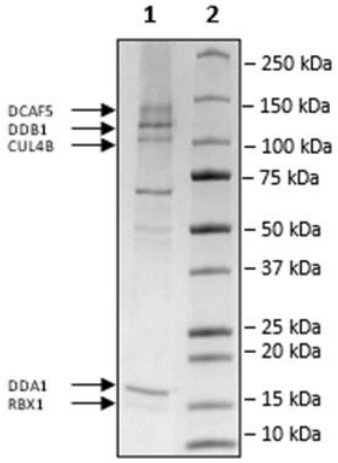
Quality Control Data

4-20% SDS-PAGE Coomassie Staining



DCAF5 Complex Activity