

Background

UBE2D1 is a widely expressed E2 ubiquitin-conjugating enzyme that mediates the ubiquitination and subsequent degradation of abnormal or short-lived proteins by working in concert with E1 activating and various E3 ligase enzymes. It is one of four members of the UBE2D family, which includes UBE2D2, UBE2D3, and UBE2D4, and is involved in ubiquitinating diverse substrates across multiple cellular processes. UBE2D1 functions alongside several E3 ligase complexes, including those containing SIAH1, CACYBP/SIP, SKP1, APC, and TBL1X, and collaborates with the E3 ligase E6AP to mediate ubiquitination of p53/TP53. Additionally, UBE2D1 plays a role in regulating angiogenesis by controlling VEGFR2 levels, with hypoxia-responsive angiogenesis in skeletal muscle being impaired when UBE2D1 levels are elevated by TNF α stimulation. It has also been shown to interact with BRCA1/BARD1, preferentially catalyzing atypical, non-degradative K6-linked polyubiquitin chains.

Alternate Names

Ubiquitin-Conjugating Enzyme E2D 1, Ubch5, E2(17)KB1, Ubch5A, UBC4/5, Stimulator Of Fe Transport (SFT)

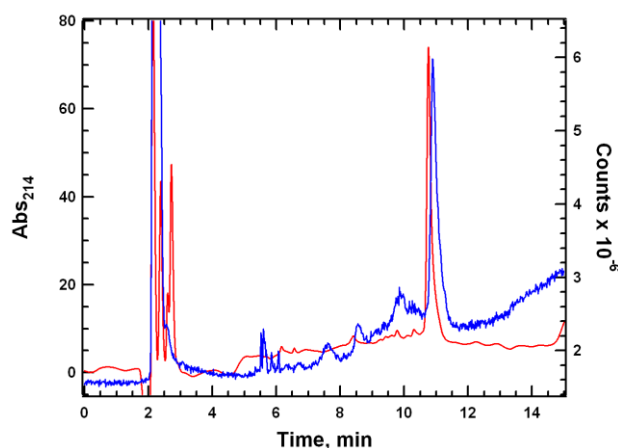
Application(s)

Ubiquitin ligation reactions

Product Specifications

Tag	None
Purity	$\geq 95\%$ by RP-HPLC
Molecular Weight	16,602.4 Da by MS (calculated 16,602.1)
Quantity	20 or 75 μ l of a 40 μ M solution (0.8 and 3 nmoles, respectively)
Species	Human, recombinant; Accession No. P51668
Expression System	<i>E. Coli</i>
Physical State	Liquid
Buffer	50 mM Tris, pH 7.5; 150 mM NaCl; 10 mM DTT; 10% glycerol
Solubility	> 3 mg/mL
Stability & Storage	Over 1 year at -80°C. Avoid repeated freeze/thaw cycles

Product QC



RP- HPLC

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References

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3. Nishikawa H et al., J. Biol. Chem. 2004; 279, 3916–3924.

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