

UBE2D4 (UbcH5d) [untagged]

E2 – Ubiquitin Conjugating Enzyme

Alternate Name: LOC51619 protein, UbcH5d

Cat. No. **62-0017-020**
Lot. No. **30020**

Quantity: 20 µg
Storage: -70°C

FOR RESEARCH USE ONLY

NOT FOR USE IN HUMANS



CERTIFICATE OF ANALYSIS

Background

The enzymes of the ubiquitylation pathway play a pivotal role in a number of cellular processes including regulated and targeted proteasomal degradation of substrate proteins. Three classes of enzymes are involved in the process of ubiquitylation; activating enzymes (E1s), conjugating enzymes (E2s) and protein ligases (E3s). UBE2D4 is a member of the E2 ubiquitin-conjugating enzyme family and the human gene was first described by Colland *et al.* (2004).

References:

Colland F, Jacq X, Trouplin V, Mouglin C, Groizeleau C, Hamburger A, Meil A, Wojcik A, Legrain P, Gauthier J (2004) Functional proteomics mapping of a human signaling pathway. *Genome Res* 14, 1324-32.

Physical Characteristics

Species: human

Source: *E. coli* expression

Quantity: 20 µg

Concentration: 1 mg/ml

Formulation: 50 mM HEPES pH 7.5,
150 mM sodium chloride, 2 mM
dithiothreitol, 10% glycerol

Molecular Weight: ~20 kDa

Purity: >98% by InstantBlue™ SDS-PAGE

Stability/Storage: 12 months at -70°C;
aliquot as required

Protein Sequence:

GSHMASMTGGQQMGRGSEFELGSTSNGRQCA
GIRPCAAAMALKRIQKELTDLQRDPPAQCSAG
PVGDDLFHWQATIMGPNDSPYQGGVFFLTI
HFPTDYPFKPPKVAFTTKIYHPNINSNGSI
CLDILRSQWSPALTVSKVLLSICSLLCDPNPD
DPLVPEIAHTYKADREKYNRLAREWTQKYAM

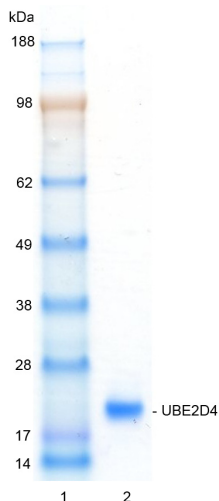
The residues underlined remain after cleavage and removal of the purification tag.

UBE2D4 (regular text): Start **bold italics** (amino acid residues 1-147)

Accession number: NP_057067

Quality Assurance

Purity:
4-12% gradient SDS-PAGE
InstantBlue™ staining
Lane 1: MW markers
Lane 2: 1 µg UBE2D4



Protein Identification:

Confirmed by mass spectrometry.

E2-Ubiquitin Thioester Loading Assay:

The activity of UBE2D4 was validated by loading E1 UBE1 activated ubiquitin onto the active cysteine of the UBE2D4 E2 enzyme via a transthioylation reaction. Incubation of the UBE1 and UBE2D4 enzymes in the presence of ubiquitin and ATP at 30°C was compared at two time points, T₀ and T₁₀ minutes. Sensitivity of the ubiquitin/UBE2D4 thioester bond to the reducing agent DTT was confirmed.



www.ubiquigent.com
Dundee, Scotland, UK

ORDERS / SALES SUPPORT

International: +1-617-245-0003
US Toll-Free: 1-888-4E1E2E3 (1-888-431-3233)
Email: sales.support@ubiquigent.com

UK HQ and TECHNICAL SUPPORT

International: +44 (0) 1382 381147 (9AM-5PM UTC)
US/Canada: +1-617-245-0020 (9AM-5PM UTC)
Email: tech.support@ubiquigent.com

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Lot-specific COA version tracker: v1.0.0