

# UBE2D4 (UbcH5d) [GST-tagged]

## E2 – Ubiquitin Conjugating Enzyme

Alternate Name: LDC51619 protein, UbcH5d

**Cat. No.** 62-0016-100  
**Lot. No.** 1390

**Quantity:** 100 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 proteosomal 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).

#### Reference:

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:** 100 µg

**Concentration:** 1 mg/ml

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

**Molecular Weight:** ~44 kDa

**Purity:** >98% by InstantBlue™ SDS-PAGE

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

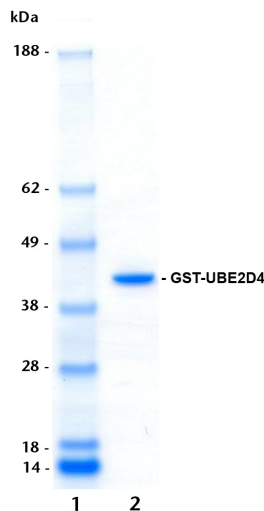
#### Protein Sequence:

MSPILGYWKIKGLVQPTRLLEYLEEKYEEH  
LYERDEGDKWRNKKFELGLEFPNLPYYIDG  
VKLTQSMAIIRYIADKHNMLGGCPKER  
AEISMLEGAVLDIRYGVSRAYSKDFETLKVD  
FLSKLPEMLKMFEDRLCHKTYLNGDHTHP  
DFMLYDALDVVLYMDPMCLDAFPKLVCFK  
KRIEAIPIQIDKYLKSSKYIAWPLQGQATFG  
GGDHPKSDLEVLFGQPLGSPGPGSTRAAA  
**M**ALKRIQKELTDLQRPPAQSAGVGGDDLF  
HWQATIMGPNDSFYQGGVFFLTIHFPTDYP  
FKPPKVAFTTKIYHPNINSNGSICLDILRSQWS  
PALTYSKVLISICLLCDPNPDDPLVPEIAHTYKA  
DREKYNRLAREWTQKYAM

Tag (**bold text**): N-terminal glutathione-S-transferase (GST)  
Protease cleavage site: PreScission™ (LEVLFGQ▼GP)  
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 GST-UBE2D4



#### Protein Identification:

Confirmed by mass spectrometry.

#### E2-Ubiquitin Thioester Loading Assay:

The activity of GST-UBE2D4 was validated by loading E1 UBE1 activated ubiquitin onto the active cysteine of the GST-UBE2D4 E2 enzyme via a transthiolation reaction. Incubation of the UBE1 and GST-UBE2D4 enzymes in the presence of ubiquitin and ATP at 30°C was compared at two time points, T<sub>0</sub> and T<sub>10</sub> minutes. Sensitivity of the ubiquitin/GST-UBE2D4 thioester bond to the reducing agent DTT was confirmed.



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Lot-specific COA version tracker: v1.0.0