Product Name: UBE3C

Alternate Names: HECTH2, RAUL, Ubiquitin-protein ligase E3C

Product Code: TE3-066 **Quantity:** 25 µg

FOR RESEARCE USE ONLY (RUO)

Storage:
Use a manual defrost freezer and avoid repeated freeze-thaw cycles. Aliquot and store ≤ -70°C (stable for 24 months from date of receipt).

Verified Applications / Usage
In vitro, recombinant Ubiquitin-protein ligase E3C accepts activated ubiquitin from E2 conjugating enzymes UBE2D1 or UBE2L3, in a reaction that also requires Ubiquitin Activating Enzyme 1 (an E1). The charged E3 is capable of producing anchored and unanchored poly-ubiquitin chains. Appropriate enzyme concentrations are specific to the application.

Physical Characteristics

Species: Homo sapiens (Human) **Predicted MW (kDa):** 59

Source: E.coli BL21(DE3) A.I. **Purity:** 95%

Concentration: 50 - 70 µM

Formulation: 40 mM HEPES, 100 mM NaCl, 10% Glycerol, 1 mM EDTA, 1 mM TCEP, pH 7.6

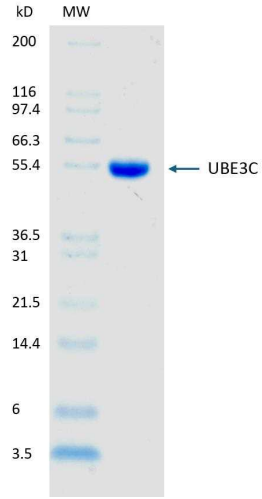
Shipping: The product is shipped with dry ice or equivalent. Upon receipt, store it immediately at the temperature recommended below.

Stability/Storage: Use a manual defrost freezer and avoid repeated freeze-thaw cycles. Aliquot and store ≤ -70°C (stable for 24 months from date of receipt).

Quality Assurance

Purity & SDS-PAGE

Protein ID: Ubiquitin-protein ligase E3C



2 µg UBA1 run on 4-12% SDS-PAGE gel under reducing conditions, then visualized with Colloidal Coomassie Blue Stain.

Activity Assay

Verified in Poly-ubiquitin Chain Synthesis Assay.

Background

Description

UBE3C (also known as, HECTH2/RAUL) is a human HECT-type E3 ubiquitin ligase that specializes in building mixed Lys29/Lys48 poly-ubiquitin chains and in elongating pre-existing chains at the 26S proteasome. By docking onto the regulatory particle, UBE3C senses partially proteolyzed substrates and appends fresh ubiquitin, boosting proteasome processivity in vitro and in cells. Chain-synthesis assays show that its bilobed HECT domain can switch linkage preference by altering E2 orientation, enabling processive chain extension across Lys29→Lys29/Lys48 architectures. Recombinant UBE3C therefore serves as a powerful reagent for proteasome-coupled ubiquitylation assays and production of polyubiquitin substrates for DUB specificity studies.

Accession Number: Q15386 **Entrez Gene ID:** UBE3C

Protein Sequence

MGWSHPQFEKGSHHHHHHGSLEVLFQGPGSMSDQEAKPSTEDLGDK
KEGEYIKLKVIGQDSSEIHFKVKMTTHLKKLKESYCQRQGVPMNSLRFL
FEGQRIADNHTPKELGMEEEDVIEVYQEQTGGVPFEERVKIFQRLIYAD
KQEVQGDGPFLDGINVTIRRNYIYEDAYDKLSPENEPDLKKRIRVHLLNA
HGLDEAGIDGGGIFREFLNELLKSGFNPNQGFFKTTNEGLLYPNPAAQ
MLVGDSFARHYYFLGRMLGKALYENMLVELPFAGFFLSKLLGTSADVDI
HHLASLDPEVYKNLLFLKSYEDDVEELGLNFTVVNNDLGEAQVVELKFG
GKDIPVTSANRIAYIHLVADYRLNRQIRQHCLAFRQGLANVVSLEWLRM
FDQQEIQVLISGAQVPISLEDLKSFTNYSGGYSADHPVIKVFWRVVEGF
TDEEKRKLLKFVTSCSRPPLLGFKELYPAFCIHNGGSDLERLPTASTCM
NLLKLPEFYDETLLRSKLLYAIECAAGFELS