

**Product Name:** AREL1

**Alternate Names:** AREL1 (gene AREL1; synonyms KIAA0317, FLR)

**Product Code:** TE3-065

**Quantity:** 25 µg

**FOR RESEARCH 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 Apoptosis-resistant E3 ubiquitin-protein ligase 1 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 demonstrates strong autoubiquitylation in the absence of added substrates. 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:** 20 - 30 µM

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

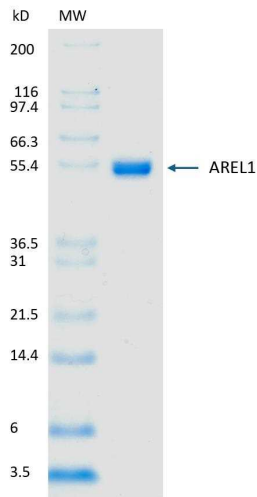
**Shipping:** The product is shipped with dry ice or equivalent. Upon receipt, store it immediately at the temperature recommended below.

**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:** Apoptosis-resistant  
E3 ubiquitin protein ligase 1



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

Apoptosis-resistant E3 ubiquitin-protein ligase 1 (AREL1) is a human HECT-type E3 that forges mainly Lys11- and Lys33-linked poly-ubiquitin chains, acting like a molecular locksmith that keeps cell-death doors firmly shut. Cytosolic AREL1 mono- or polyubiquitylates IAP antagonists, SMAC/DIABLO, HtrA2/Omi and ARTS, marking them for proteasomal disposal and thus preserving XIAP's grip on caspase-3. It also blocks TNF-driven necroptosis by tagging the mitochondrial adaptor Metaxin-2, short-circuiting RIPK1-RIPK3 signaling. Because of its ability to generate Lys33-linked poly-ubiquitin chains, recombinant AREL1 is valuable in producing substrates for DUB specificity studies. Furthermore, its ability to erase pro-death cues makes it an attractive testbed for bifunctional degraders aimed at tipping the survival–apoptosis balance.

**Accession Number:** O15033

**Entrez Gene ID:** AREL1

## Protein Sequence

MGWSHPQFEKGSHHHHHHGSLEVLFFQGGPGMSDQEAKPSTEDLGDK  
KEGEYIKLKVIGQDSSEIHFKVKMTTHLKKLKESYCQRQGVPMNSLRFL  
FEGQRIADNHTPKELGMEEEDVIEVYQEQTGGSETFQDKVNFFQREL  
QVHMKRPHSKVTLKVSRRHALLESSLKATRNFSDWSKNFEVVFQDEE  
ALDWGGPRREWFELICKALFDTTNQLFTRFSDNNQALVHPNPNRPAHL  
RLKMYEFAGRLVGKCLYESSLGGAYKQLVRARFTRSFLAQIIGLRMHYK  
YFETDDPEFYKSKVCFILNNDMSEMELVFAEEKYNKSGQLDKVVELMT  
GGAQTPVTNANKIFYLNLLAQYRLASQVKEEVEHFLKGLNELVPENLLAI  
FDENELELLMCGTGDISVSDFKAHAVVVGGSWHFREKVMRWFWTVVS  
SLTQEELARLLQFTTGSSQLPPGGFAALCPSFQIIAAPHSTLPTAHTCF  
NQLCLPTYDSYEEVHRMLQLAISEGCEGFGML