

## TRIP12 Protein, Human, Recombinant (His & Myc)

### General Information

|                       |  |
|-----------------------|--|
| Synonyms:             | TRIP12;E3 ubiquitin-protein ligase for Arf (ULF);Thyroid receptor-interacting protein 12 (TR-interacting protein 12;TRIP-12);HECT-type E3 ubiquitin transferase TRIP12;E3 ubiquitin-protein ligase TRIP12;KIAA0045;ULF |
| Protein Construction: | 1881-1992 aa   |
| Species:              | Human  |
| Expression Host:      | E. coli  |
| Accession:            | Q14669   |
| Molecular Weight:     | 19.9 kDa (predicted)   |
| AA Sequence:          | ECCRPDHGYTHDSRAVKFLFEILSSFDFNEQQLFLQFVTGSPRLPVGGFRSLNPPLTIVRKTFFESTENPDDFLPS<br>VMTCVNYLKLDPDYSSIEIMREKLLIAAREGQQSFHLS   |

### QC Testing

|                      |   |
|----------------------|---|
| Biological Activity: | Activity has not been tested. It is theoretically active, but we cannot guarantee it. If you require protein activity, we recommend choosing the eukaryotic expression version first. |
| Purity:              | > 85% as determined by SDS-PAGE.  |
| Endotoxin:           | < 1.0 EU/μg of the protein as determined by the LAL method.   |
| Formulation:         | Tris-based buffer, 50% glycerol   |

### Preparation and Storage

#### Reconstitution:

A Certificate of Analysis (CoA) containing reconstitution instructions is included with the products. Please refer to the CoA for detailed information.

#### Stability & Storage:

Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months.

Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

#### Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

### Protein Background

E3 ubiquitin-protein ligase involved in ubiquitin fusion degradation (UFD) pathway and regulation of DNA repair. Part of the ubiquitin fusion degradation (UFD) pathway, a process that mediates ubiquitination of protein at their N-terminus, regardless of the presence of lysine residues in target proteins. Acts as a key regulator of DNA damage response by acting as a suppressor of RNF168, an E3 ubiquitin-protein ligase that promotes accumulation

of 'Lys-63'-linked histone H2A and H2AX at DNA damage sites, thereby acting as a guard against excessive spreading of ubiquitinated chromatin at damaged chromosomes. In normal cells, mediates ubiquitination and degradation of isoform p19ARF/ARF of CDKN2A, a lysine-less tumor suppressor required for p53/TP53 activation under oncogenic stress. In cancer cells, however, isoform p19ARF/ARF and TRIP12 are located in different cell compartments, preventing isoform p19ARF/ARF ubiquitination and degradation. Does not mediate ubiquitination of isoform p16-INK4a of CDKN2A. Also catalyzes ubiquitination of NAE1 and SMARCE1, leading to their degradation. Ubiquitination and degradation of target proteins is regulated by interaction with proteins such as MYC, TRADD or SMARCC1, which disrupt the interaction between TRIP12 and target proteins. Mediates ubiquitination of ASXL1: following binding to N(6)-methyladenosine methylated DNA, ASXL1 is ubiquitinated by TRIP12, leading to its degradation and subsequent inactivation of the PR-DUB complex.

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