

FLAG-TUBE2

Cat. # UM602

Background

Based on protein domains known to possess an affinity for ubiquitin, Tandem Ubiquitin Binding Entities (TUBEs) have been developed for the isolation and identification of ubiquitinated proteins. TUBEs display up to a 1000-fold increase in affinity for poly-ubiquitin moieties over the single ubiquitin binding associated domain (UBA). In addition, TUBEs display a protective effect on polyubiquitinated proteins, allowing for detection at relatively low abundance. These properties effectively "capture" protein in its polyubiquitin state. The affinity of solution- phase TUBE2 for K63 linked tetra-ubiquitin is approximately equal to K48 linked tetra-ubiquitin (5-10nM).

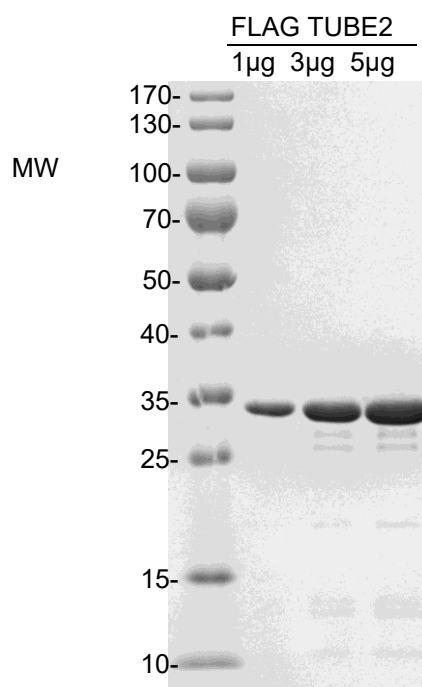
Application(s)

- Pull-down of poly-ubiquitinated proteins from cell lines, tissues and organs.
- Protection of poly-ubiquitinated proteins from both deubiquitination and degradation by the proteasome

Product Specifications

Affinity tag	FLAG
Purity	> 95% by SDS-PAGE
Molecular Weight	29 kDa
Quantity	200 µg, 1 mg
Expression System	<i>E. Coli</i>
Physical State	Liquid
Buffer	50 mM HEPES (pH 7.5), 150 mM NaCl, 10% glycerol
Concentration	Variable, depending on lot number
Storage	Store at -80° C. Avoid repeated freeze/thaw cycles

Product QC



All products are for research use only • Not intended for human or animal diagnostic or therapeutic uses
Copyright © 2025 LifeSensors, Inc. All Rights Reserved

References

1. Shaik, S., Kumar Reddy Gayam, P., Chaudhary, M., Singh, G., & Pai, A. (2024). Advances in designing ternary complexes: Integrating in-silico and biochemical methods for PROTAC optimisation in target protein degradation. *Bioorganic Chemistry*, 153(107868), 107868.
2. Welsh, C. L., Allen, S., & Madan, L. K. (2023). Setting sail: Maneuvering SHP2 activity and its effects in cancer. In *Advances in Cancer Research*. *Advances in Cancer Research* 160, 17–60.
3. Zhao, X., Chen, Y., Su, H., & Zhang, L. (2023). From classic medicinal chemistry to state-of-the-art interdisciplinary medicine: Recent advances in proteolysis-targeting chimeras technology. *Interdisciplinary Medicine*, 1(2), e20230004.
4. Gross, P. H., Sheets, K. J., Warren, N. A., Ghosh, S., Varghese, R. E., Wass, K. E., & Kadimisetty, K. (2022). Accelerating PROTAC drug discovery: Establishing a relationship between ubiquitination and target protein degradation. *Biochemical and biophysical research communications*, 628, 68–75.
5. M. Mattern, J. Sutherland, K. Kadimisetty, R. Barrio, M.S. Rodriguez (2019). Using ubiquitin binders to decipher the ubiquitin code. *Trends Biochem. Sci.*, 44, pp. 599-615
6. Sims, J. J., Scavone, F., Cooper, E. M., Kane, L. A., Youle, R. J., Boeke, J. D., and Cohen, R. E. (2012) Polyubiquitin sensor proteins reveal localization and linkage-type dependence of cellular ubiquitin signaling, *Nat Meth* 9, 303-309.
7. Hjerpe, R., Aillet, F., Lopitz-Otsoa, F., Lang, V., England, P., and Rodriguez, M. S. (2009) Efficient protection and isolation of ubiquitylated proteins using tandem ubiquitin-binding entities, *EMBO Rep* 10, 1250-1258.