

## Agarose-TUBE2

Cat. # UM402

**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 ubiquitylated 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 polyubiquitylated proteins, allowing for detection at relatively low abundance. These properties effectively "capture" protein in its polyubiquitin state.

The affinity of solution phase TUBE 2 for K63 linked tetra-ubiquitin is approximately equal to K48 linked tetra-ubiquitin (5-10nM). High efficiency coupling of TUBE2 to agarose is through a HIS6-SUMO tag, avoiding modification of the UBA domains.

- Application:**
- Pull down of poly-ubiquitylated proteins from cell lines, tissues and organs
  - Protection of poly-ubiquitylated proteins from both deubiquitylation and degradation by the proteasome

### Product Information

<b>Affinity tag:</b>	HIS6-SUMO
<b>Purity:</b>	(prior to coupling) > 95% by SDS-PAGE
<b>Molecular Weight:</b>	not applicable
<b>Physical State:</b>	50% resin slurry (PBS, pH 7.5, 20% ethanol)
<b>Quantity:</b>	0.5ml resin
<b>Solubility:</b>	not applicable
<b>Storage:</b>	-20° C. Avoid storage at lower temperatures.

### References

1. Stormo, Adrienne ED, Farbod Shavarebi, Molly FitzGibbon, Elizabeth M. Earley, Hannah Ahrendt, Lotus S. Lum, Erik Verschueren et al (2022) "The E3 ligase TRIM1 ubiquitinates LRRK2 and controls its localization, degradation, and toxicity." *Journal of Cell Biology* 221, no. 4.
2. Hark, Timothy J., Nalini R. Rao, Charlotte Castillon, Tamara Basta, Samuel Smukowski, Huan Bao, Arun Upadhyay et al. (2021) "Pulse-chase proteomics of the App knockin mouse models of Alzheimer's disease reveals that synaptic dysfunction originates in presynaptic terminals." *Cell systems* 12, no. 2: 141-158.

All products are for research use only • not intended for human or animal diagnostic or therapeutic uses  
Copyright © 2009 LifeSensors, Inc. All Rights Reserved