

OTUB1 Protein, Human, Recombinant (His)

General Information

Synonyms:	OTU deubiquitinase, ubiquitin aldehyde binding 1; OTB1; HSPC263; OTU1
Protein Construction:	A DNA sequence encoding the human OTUB1 (Q96FW1-1) (Met 1-Lys 271) was expressed, with a polyhistidine tag at the N-terminus. Predicted N terminal: Met
Species:	Human
Expression Host:	E. coli
Accession:	Q96FW1-1
Molecular Weight:	32.8 kDa (predicted); 37 kDa (reducing conditions)

QC Testing

Biological Activity:	Activity testing is in progress. It is theoretically active, but we cannot guarantee it. If you require protein activity, we recommend choosing the eukaryotic expression version first.
Purity:	> 97 % as determined by SDS-PAGE
Endotoxin:	Please contact us for more information.
Formulation:	Supplied as sterile PBS, 20% glycerol, pH 7.4.

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:

It is recommended to store the product under sterile conditions at -20°C to -80°C. Samples are stable for up to 12 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

Shipping:

Proteins are shipped with blue ice.

Protein Background

Ubiquitin thioesterase OTUB1, also known as Deubiquitinating enzyme OTUB1, OTU domain-containing ubiquitin aldehyde-binding protein 1, Otubain-1, Ubiquitin-specific-processing protease OTUB1, OTUB1 and OTB1, is a cytoplasm protein that belongs to the peptidase C65 family. OTUB1 is a hydrolase that can remove conjugated ubiquitin from proteins and plays an important regulatory role at the level of protein turnover by preventing degradation. OTUB1 is a regulator of T-cell anergy, a phenomenon that occurs when T-cells are rendered unresponsive to antigen rechallenge and no longer respond to their cognate antigen. OTUB1 acts via its interaction with RNF128 / GRAIL, a crucial inductor of CD4 T-cell anergy. Isoform 1 of OTUB1 destabilizes RNF128, leading to prevent anergy. In contrast, isoform 2 of OTUB1 stabilizes RNF128 and promotes anergy. OTUB1

regulates RNF128-mediated ubiquitination, but does not deubiquitinate polyubiquitinated RNF128.

Deubiquitinates estrogen receptor alpha (ESR1). OTUB1 mediates deubiquitination of 'Lys-48'-linked polyubiquitin chains, but not 'Lys-63'-linked polyubiquitin chains. OTUB1 is also capable of removing NEDD8 from NEDD8 conjugates, but with a much lower preference compared to 'Lys-48'-linked ubiquitin.

Reference

Balakirev M.Y., et al., 2003, EMBO Rep. 4:517-522.

Soares L., et al., 2004, Nat. Immunol. 5:45-54.

Stanisic V., et al., 2009, J. Biol. Chem. 284:16135-16145.

Choudhary C., et al., 2009, Science 325:834-840.

Edelmann M.J., et al., 2009, Biochem. J. 418:379-390.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

This product is for Research Use Only · Not for Human or Veterinary or Therapeutic Use

Tel:781-999-4286 E_mail:info@targetmol.com Address:34 Washington Street,Wellesley Hills,MA 02481