

OTUB2 Protein, Human, Recombinant (His)

General Information

Synonyms:	OTU deubiquitinase, ubiquitin aldehyde binding 2; OTU2; OTB2; C14orf137
Protein Construction:	A DNA sequence encoding the human OTUB2 (Q96DC9-1) (Met 1-His 234) was expressed, with a polyhistidine tag at the N-terminus. Predicted N terminal: Met
Species:	Human
Expression Host:	E. coli
Accession:	Q96DC9-1
Molecular Weight:	29 kDa (predicted); 30 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:	Lyophilized from a solution filtered through a 0.22 μ m filter, containing PBS, 10% glycerol, pH 7.5. Typically, a mixture containing 5% to 8% trehalose, mannitol, and 0.01% Tween 80 is incorporated as a protective agent before lyophilization.

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 recombinant proteins at -20°C to -80°C for future use. 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

Otubain 2 (OTUB2) is a member of DUBs that belong to the ovarian tumour (OTU) superfamily of proteins which consists of a five-stranded β -sheet sandwiched in between a small helical amino-terminal region consisting of α 1 and α 2, and a large helical region comprised of α 3- α 10. Like other DUBs, otubain 2 (OTUB2) cleaves proteins precisely at the ubiquitin-protein bond so that ubiquitylation process can be reversed and regulated. Otubain 2 (OTUB2)'s active-site cleft is sterically occluded by a novel loop conformation resulting in an oxyanion hole, which

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consists uniquely of backbone amides. Furthermore, the residues that orient and stabilize the active-site histidine of otubain 2 (OTUB2) are different from other cysteine proteases. This reorganization of the active-site topology provides a possible explanation for the low turnover and substrate specificity of the otubains.

Reference

Balakirev MY, et al. (2003) Otubains: a new family of cysteine proteases in the ubiquitin pathway. EMBO Rep 4 (5): 517-22.

Nanao MH. (2004) Crystal structure of human otubain 2. EMBO reports. 5: 783-8.

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