

# His<sub>6</sub>-UBE2K

Cat. No. SBB-CE0022  
Lot. No. 163060022



# South Bay Bio

## UBE2K

Human UBE2K (HIP-2) is an E2 ubiquitin conjugating enzyme. An E1 activating enzyme is required to attach ubiquitin to UBE2K via an active site cysteine. The mechanism of ubiquitin transfer involves the breaking of a E1-Ub thioester linkage, followed by a reformation of a UBE2K-Ub thioester. UBE2K is capable of synthesizing K-48 linked ubiquitin chains and can do so without an E3 ubiquitin ligating enzyme present. Although an E3 ligase is not required for chain formation, free UBE2K synthesized K48 polyubiquitin chains have been shown to interact with the E3 TRIM6, leading to activation of IKKε kinase activity and subsequent antiviral activity. This recombinant UBE2K is N-terminally poly-histidine tagged and expressed in *E.coli*. Final purity for this enzyme is > 95% - determined by SDS-PAGE.

## Product Information

**Quantity:** 100µg      **Molecular Weight:** 22 kDa

**Concentration:** 50 µM, 1.25 mg/mL

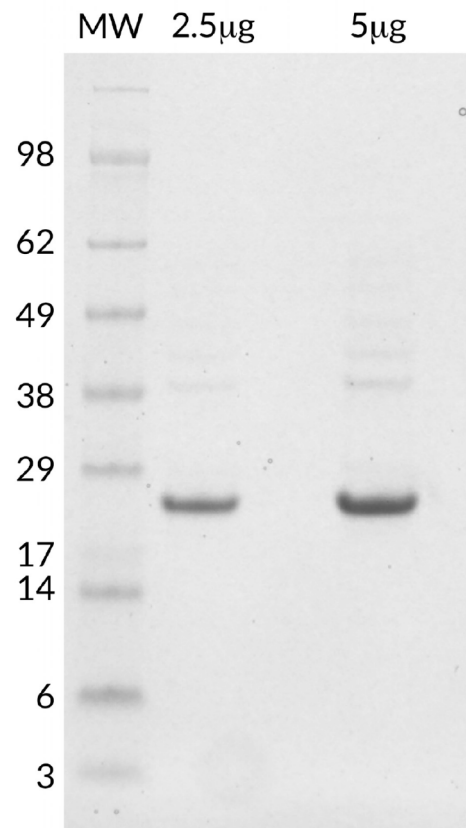
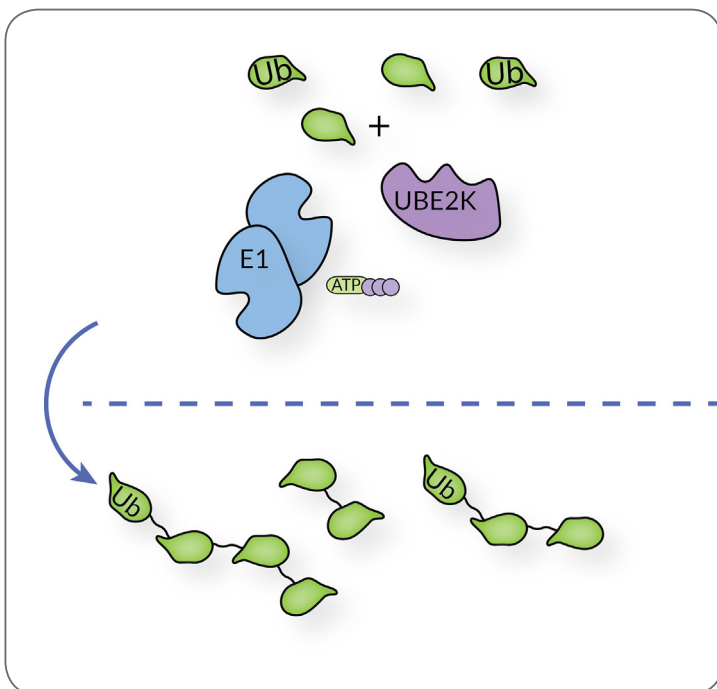
**Purity:** >95% by SDS-PAGE

**Storage Buffer:** HEPES pH 7.5, 150mM NaCl, 10% glycerol, 2mM TCEP

**Storage:** -80C, Avoid multiple freeze / thaw

**Usage:** Working concentrations of this enzyme range from 1 to 5µM.

## Quality Control and Performance Data



**UBE2K SDS-PAGE.** From left to right, increasing amounts of UBE2K loaded onto a 4-20% SDS-PAGE gel, stained with coomassie brilliant blue. Purity is > 95%.

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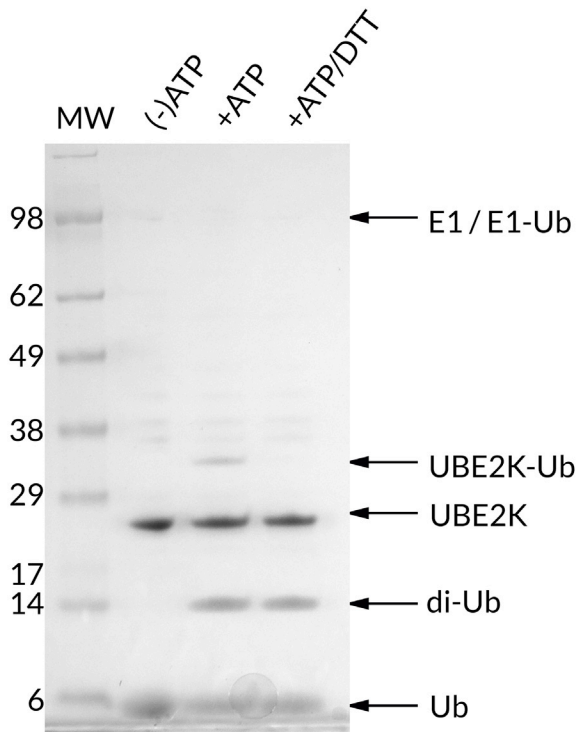
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## References

- 1) Komander, David and Michael Rape. "The Ubiquitin Code". Annual Review of Biochemistry 81.1 (2012): 203-229. Web. 9 Mar. 2017.
- 2) Middleton, Adam J. and Catherine L. Day. "The Molecular Basis Of Lysine 48 Ubiquitin Chain Synthesis By Ube2k". Scientific Reports 5 (2015): 16793. Web. 9 Mar. 2017.

**Thioester Activity Assay.** UBE2K forms a thioester with UB in an ATP dependent manner, and the bond can be reduced with addition of excess DTT. The thioester assay also shows di-ubiquitin formation with addition of ATP. The UBE2K is active.

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