

## MATERIAL DATA SHEET

### Recombinant Human HECTD2

#### Cat. # E3-302

HECTD2 (aka "HECT domain-containing protein 2" or "HECT-type E3 ubiquitin transferase HECTD2") is a 776 amino acid member of the HECT (Homologous to E6AP Carboxyl Terminus) domain family of Ubiquitin ligases. With a predicted weight of 88 kDa, human HECTD2 shares 89% identity and 94% similarity with the mouse orthologue. In innate immunity HECTD2 exerts a pro-inflammatory effect by contributing to the ubiquitylation and degradation of PIAS1, a multifunctional and potent anti-inflammatory protein that negatively regulates several key inflammatory pathways. Small molecule inhibitors of HECTD2 were found to attenuate lipopolysaccharide (LPS)-induced lung inflammation. HECTD2 has also been shown to ubiquitylate BoNT/A, a catalytic light chain of botulinum neurotoxin. Ubiquitylation can lead to the proteasomal degradation of the light chain, but it's rescued from destruction by the dominant effect of a deubiquitinating enzyme, VCIP135/VCPIP1.

#### Product Information

<b>Quantity:</b>	25 µg
<b>MW:</b>	88 kDa
<b>Source:</b>	<i>E. coli</i> -derived human HECTD2 protein Accession # Q5U5R9
<b>Stock:</b>	X mg/ml (X µM) in 50 mM HEPES, pH 7.0, 100 mM NaCl, 5% (v/v) Glycerol, 5 mM DTT
<b>Purity:</b>	>95%, by SDS-PAGE under reducing conditions and visualized by Colloidal Coomassie® Blue stain.

#### Use & Storage

<b>Use:</b>	Typical enzyme concentration to support conjugation <i>in vitro</i> is 100-500 nM depending on experimental conditions.
<b>Storage:</b>	<b>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</b> <ul style="list-style-type: none"><li>• 24 months from date of receipt, -70 °C as supplied.</li><li>• 6 months, -70 °C under sterile conditions after opening.</li></ul>

## Literature

### References:

1. Coon T.A. *et al.* (2015) *Sci. Transl. Med.* doi: 10.1126/scitranslmed.aab3881
2. Tsai Y.C. *et al.* (2017) *Proc. Natl. Acad. Sci.* **114**: E5158-E5166

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