

Lot # XXXXX

MATERIAL DATA SHEET

HECTD2, human recombinant

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

Quantity:	25 µg
Stock:	X mg/ml (X µM) in 50 mM HEPES pH 7.0, 100 mM NaCl, 5% (v/v) Glycerol, 5 mM DTT
MW:	88 kDa
Purity:	> 95% by SDS-PAGE under reducing conditions and visualized by Colloidal Coomassie Blue Stain

Use & Storage

Use:	Recombinant Human HECTD2 is a Ubiquitin ligase (E3) that functions downstream of a Ubiquitin-activating (E1) enzyme and a Ubiquitin-conjugating (E2) enzyme to conjugate Ubiquitin to substrate proteins. Reaction conditions will need to be optimized for each specific application. We recommend an initial HECTD2 concentration of 100-500 nM.
Storage:	Store at -80°C. Avoid multiple freeze/thaw cycles.

Literature

References:	Coon T.A. <i>et al.</i> (2015) <i>Sci. Transl. Med.</i> doi: 10.1126/scitranslmed.aab3881 Tsai, Y.C. <i>et al.</i> (2017) <i>Proc Natl Acad Sci</i> 114 : E5158–E5166
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840 Memorial Drive, Cambridge, MA 02139 Phone: 617-576-2210 FAX: 617-492-3565
www.bostonbiochem.com

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