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MATERIAL DATA SHEET

His₆-Rap80 UIM, *human recombinant* Cat. # UBE-230

Rap80 (Receptor Associated Protein 80) interacts with BRCA1, a ubiquitin E3-ligase which functions in conjugation with the BARD1 deubiquitinating enzyme. BRCA1 is recruited to DNA damage sites by poly-ubiquitin chains through Rap80 which contains 2 tandem ubiquitin-interacting motifs (UIMs). Rap80 constitutes a protein complex with ABRA1 which interacts with the BRCT domain of BRCA1. Upon DNA damage the Rap80-ABRA1 complex targets the BRCA1-BARD1 complex to K6- and K63-linked poly-Ub chains at these foci. The UIM domains of Rap80 have been shown to have preferential binding to K-6 and K63-linked Ub chains and binds to K48-chain with a much lower efficiency. It is not known if Rap80 UIMs interact with Ub chains linked via K11, K27 or K33. Rap80 has a low affinity for mono-, di- and tri-Ub but binds efficiently to tetra (or greater) ubiquitin chains. This protein can be used for the isolation and identification of ubiquitinated proteins that are non-K48-linked. This protein is His-tagged which allows for metal chelate affinity purification and also allows for convenient immuno-detection of conjugates using His₆-specific antibodies.

Product Information

Quantity:	250 µg
MW:	8.5 kDa
Stock:	X mg/ml (X µM) 50 mM Hepes, 250 mM NaCl, 1 mM DTT pH 8.0
Purity:	>95% by SDS-PAGE

Use & Storage

Use:	Use 50-100 µg of protein to pull down 10-20 µg of purified K63-linked ubiquitin chains. The amount necessary for use in crude lysates needs to be determined empirically.
Storage:	Store at -80°C. Avoid multiple freeze/thaw cycles.

Literature

References:	Buchberger A. (2002) <i>Tren. Cell. Biol.</i> 12 :216-221
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	Sobhian B., <i>et al.</i> (2007) <i>Science.</i> 316 :1198-1202
	Wang B., (2007) <i>Science.</i> 316 :1194-1198
	Wu W., <i>et al.</i> (2008) <i>Cell. Div.</i> 31 -10
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