

## BRCC36 Protein, Human (His-SUMO)

<b>Cat. No.:</b>	HY-P72107
<b>Synonyms:</b>	BRCA1-A complex subunit BRCC36; BRCA1/BRCA2 containing complex subunit 3; BRCA1/BRCA2 containing complex subunit 36; BRCA1/BRCA2-containing complex subunit 3; BRCA1/BRCA2-containing complex subunit 36; Brcc3; BRCC3_HUMAN; BRCC36; BRISC complex subunit BRCC36; C6.1A; Chromosome X open reading frame 53; CXorf53; Lys-63-specific deubiquitinase BRCC36; OTTHUMP00000061450
<b>Species:</b>	Human
<b>Source:</b>	E. coli
<b>Accession:</b>	P46736 (A2-E316)
<b>Gene ID:</b>	79184
<b>Molecular Weight:</b>	Approximately 51.9 kDa

### PROPERTIES

<b>AA Sequence</b>	<pre> AVQVVQAVQA    VHLESDAFLV    CLNHALSTEK    E EVMGLCIGE LNDDTRSDSK    FAYTGTEMRT    VAEKVDVAVRI  VHIHSVILR RSDKRKDRVE    ISPEQLSAAS    TEAERLAELT    GRPMRVVGWY HSHPHITVWP    SHVDVRTQAM    YQMMDQGFVG    LIFSCFIEDK NTKTGRVLYT    CFQSIQAQKS    SESLHGPRDF    WSSSQHISIE GQKEEERYER    IEIPIHIVPH    VTIGKVCLES    AVELPKILCQ EEQDAYRRIH    SLTHLDSVTK    IHNGSVFTKN    LCSQMSAVSG PLLQWLEDRL    EQNQQLQEL    QQEKEELMQE    LSSLE           </pre>
<b>Biological Activity</b>	The enzyme activity of this recombinant protein is testing in progress, we cannot offer a guarantee yet.
<b>Appearance</b>	Lyophilized powder.
<b>Formulation</b>	Lyophilized from a 0.2 µm solution of Tris-based buffer, 50% Glycerol.
<b>Endotoxin Level</b>	<1 EU/µg, determined by LAL method.
<b>Reconstitution</b>	It is not recommended to reconstitute to a concentration less than 100 µg/mL in ddH <sub>2</sub> O.
<b>Storage &amp; Stability</b>	Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.
<b>Shipping</b>	Room temperature in continental US; may vary elsewhere.

### DESCRIPTION

<b>Background</b>	BRCC36, identified as a metalloprotease, exhibits specificity in cleaving 'Lys-63'-linked polyubiquitin chains while displaying
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no activity toward 'Lys-48'-linked polyubiquitin chains. As a crucial component of the BRCA1-A complex, BRCC36 participates in DNA damage response by recognizing 'Lys-63'-linked ubiquitinated histones H2A and H2AX at sites of double-strand breaks. Within this complex, BRCC36 selectively removes 'Lys-63'-linked ubiquitin on histones H2A and H2AX, opposing the RNF8-dependent ubiquitination at double-strand breaks. Additionally, BRCC36 serves as the catalytic subunit of the BRISC complex, another multiprotein assembly dedicated to cleaving 'Lys-63'-linked ubiquitin in various substrates. The BRISC complex's involvement in mitotic spindle assembly and microtubule attachment to kinetochores, mediated by the deubiquitination of NUMA1, underscores its regulatory role in cell division. BRCC36 also contributes to interferon signaling through deubiquitination of the interferon receptor IFNAR1, enhancing its stability and cell surface expression. Furthermore, BRCC36 plays a role in regulating the NLRP3 inflammasome by mediating deubiquitination of NLRP3, leading to inflammasome assembly, and down-regulates the response to bacterial lipopolysaccharide by participating in IFNAR1 deubiquitination. In its repertoire, BRCC36 deubiquitinates HDAC1 and PWWP2B, contributing to their stabilization.

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**Caution: Product has not been fully validated for medical applications. For research use only.**

Tel: 609-228-6898

Fax: 609-228-5909

E-mail: [tech@MedChemExpress.com](mailto:tech@MedChemExpress.com)

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA