

## HERC2 Protein, Human (His)

Cat. No.:	HY-P701527
Synonyms:	HERC2; E3 ubiquitin-protein ligase HERC2; HECT domain and RCC1-like domain-containing protein 2; HECT-type E3 ubiquitin transferase HERC2
Species:	Human
Source:	E. coli
Accession:	O95714 (S3951-P4321)
Gene ID:	8924
Molecular Weight:	

### PROPERTIES

Appearance	Solution.
Formulation	Supplied as a 0.22 µm filtered solution of 50 mM Tris-HCl, pH7.5, 200 mM NaCl, 5% glycerol.
Endotoxin Level	<1 EU/µg, determined by LAL method.
Reconstitution	Please use rapid thawing with running water to thaw the protein.
Storage & Stability	Stored at -80°C for 1 year. It is stable at -20°C for 3 months after opening. It is recommended to freeze aliquots at -80°C for extended storage. Avoid repeated freeze-thaw cycles.
Shipping	Shipping with dry ice.

### DESCRIPTION

Background	<p>HERC2 Protein, functioning as an E3 ubiquitin-protein ligase, plays a crucial role in the regulation of ubiquitin-dependent retention of repair proteins on damaged chromosomes, particularly in response to ionizing radiation (IR). Upon recruitment to sites of DNA damage, HERC2 facilitates the assembly of UBE2N and RNF8, promoting the formation of 'Lys-63'-linked ubiquitin chains crucial for DNA damage-induced responses. Acting as a mediator between UBE2N and RNF8, it ensures binding specificity, while also contributing to the maintenance of RNF168 levels. Moreover, HERC2 serves as an E3 ligase that orchestrates the ubiquitination and subsequent proteasomal degradation of XPA, impacting the circadian oscillation of DNA excision repair activity. Beyond its role in DNA repair, HERC2 indirectly regulates the insulin-like growth factor receptor signaling pathway by controlling the steady-state expression of the IGF1R receptor. Additionally, HERC2 plays a role in iron metabolism by modulating the basal turnover of FBXL5. This multifaceted functionality highlights the importance of HERC2 in coordinating various cellular processes essential for genomic stability and signaling regulation.</p>
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**Caution: Product has not been fully validated for medical applications. For research use only.**

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