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[Marker Primary Antibody]

Rabbit Anti-HERC2/Biotin Conjugated antibody

Catalog Number: SL15460R-Bio

FOR RESEARCH USE ONLY

[DATASHEET]

Host:	Rabbit
Isotype:	IgG
Clonality:	Polyclonal
Target:	Anti-HERC2/Biotin
Immunogen:	KLH conjugated synthetic peptide derived from human HERC2
Purification:	affinity purified by Protein A
Concentration:	1mg/ml
Storage:	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. The lyophilized antibody is stable at room temperature for at least one month and for greater than a year when kept at -20°C. When reconstituted in sterile pH 7.4 1M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.
Applications:	ELISA=1:500-5000 not yet tested in other applications. optimal dilutions/concentrations should be determined by the end user.
Reactivity:	(predicted:Human,Mouse,Rat,Dog,Pig,Cow,Horse,Sheep)
Background:	background: HERC2 is a belongs to the HERC gene family that encodes a group of unusually large proteins, which contain multiple structural domains. All members have at least 1 copy of an N-terminal region showing homology to the cell cycle regulator RCC1 and a C-terminal HECT (homologous to E6-AP C terminus) domain found in a number of E3 ubiquitin protein ligases. Genetic variations in this gene are associated with skin/hair/eye pigmentation variability. Multiple pseudogenes of this gene are located on chromosomes 15 and 16. **Function:** E3 ubiquitin-protein ligase that regulates ubiquitin-dependent retention of repair proteins on damaged chromosomes. Recruited to sites of DNA damage in response to ionizing radiation (IR) and facilitates the assembly of UBE2N and RNF8 promoting DNA damage-induced formation of 'Lys-63'-linked ubiquitin chains. Acts as a mediator of binding specificity between UBE2N and RNF8. Involved in the maintenance of RNF168 levels. E3 ubiquitin-protein ligase that promotes the ubiquitination and proteasomal

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	degradation of XPA which influences the circadian oscillation of DNA excision repair activity. **Subunit:** Interacts (when phosphorylated at Thr-4827 and sumoylated) with RNF8 (via FHA domain); this interaction increases after ionizing radiation (IR) treatment. Interacts with XPA. Interacts with NEURL4. Via its interaction with NEURL4, may indirectly interact with CCP110 and CEP97. **Subcellular Location:** Cytoplasm. Cytoplasm, cytoskeleton, centrosome, centriole. Nucleus. Note=Recruited to sites of DNA damage in response to ionizing radiation (IR) via its interaction with RNF8. May loose association with centrosomes during mitosis. **Post-translational modifications:** Phosphorylation at Thr-4827 is required for interaction with RNF8. Sumoylated with SUMO1 by PIAS4 in response to double-strand breaks (DSBs), promoting the interaction with RNF8. **Similarity:** Contains 1 cytochrome b5 heme-binding domain. Contains 1 DOC domain. Contains 1 HECT (E6AP-type E3 ubiquitin-protein ligase) domain. Contains 1 MIB/HERC2 domain. Contains 19 RCC1 repeats. Contains 6 WD repeats. Contains 1 ZZ-type zinc finger. **Database links:** **Entrez Gene:** 8924 Human Omim: 605837 Human **SwissProt:** O95714 Human Important **Note:** This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.