

Total Hec1 Cell-Based Colorimetric ELISA Kit

Catalog No :	KA3448C
Reactivity :	Human;Mouse
Applications :	ELISA
Gene Name :	NDC80
Human Gene Id :	10403
Human Swiss Prot No :	O14777
Mouse Swiss Prot No :	Q9D0F1
Storage Stability :	2-8°C/6 months
Detection Method :	Colorimetric

Background :	<p>developmental stage:Expression peaks in mitosis.,function:Acts as a component of the essential kinetochore-associated NDC80 complex, which is required for chromosome segregation and spindle checkpoint activity. Required for kinetochore integrity and the organization of stable microtubule binding sites in the outer plate of the kinetochore.,PTM:Phosphorylation begins in S phase of the cell cycle and peaks in mitosis. Phosphorylated by NEK2. May also be phosphorylated by AURKA and AURKB.,similarity:Belongs to the NDC80/HEC1 family.,subcellular location:Localizes to kinetochores from late prophase to anaphase. Localizes specifically to the outer plate of the kinetochore.,subunit:Component of the NDC80 complex, which consists of NDC80/HEC1, CDCA1, SPBC24 and SPBC25. The NDC80 complex is formed by two subcomplexes composed of NDC80/HEC1-CDCA1 and SPBC24-SPBC25. Each subcomplex is formed by parallel interactions through the coiled-coil domains of individual subunits. Formation of a tetrameric complex is mediated by interactions between the C-terminal regions of both subunits of the NDC80/HEC1-CDCA1 subcomplex and the N-terminal regions of both subunits of the SPBC24-SPBC25 complex. The tetrameric NDC80 complex has an elongated rod-like structure with globular domains at either end. Interacts with NEK2 and ZWINT specifically during mitosis. Interacts with CENPH and MIS12. May interact with AURKB, PSMC2, PSMC5 and SMC1A. May interact with RB1 during G2 phase and mitosis.,</p>
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Function :	mitotic sister chromatid segregation, M phase of mitotic cell cycle, establishment
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of mitotic spindle orientation, microtubule cytoskeleton organization, mitotic cell cycle, M phase, nuclear division, sister chromatid segregation, cell morphogenesis, cytoskeleton organization, microtubule-based process, cell cycle, spindle organization, mitotic spindle organization, chromosome segregation, mitosis, establishment or maintenance of cell polarity, intracellular signaling cascade, protein localization, attachment of spindle microtubules to kinetochore, second-messenger-mediated signaling, cell cycle process, cell cycle phase, establishment of cell polarity, maintenance of protein location in cell, cellular component morphogenesis, microtubule anchoring, establishment of mitotic spindle localization, maintenance of protein location, phosphoinositide-mediated signaling, organelle fission, maintenance

Subcellular Location :

Nucleus . Chromosome, centromere, kinetochore . Localizes to kinetochores from late prophase to anaphase (PubMed:14699129). Localizes specifically to the outer plate of the kinetochore (PubMed:14699129). .

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