ARG62359
anti-NuMA antibody [A73-B/D12]

Package: 100 µl
Store at: -20°C

Summary

Product Description	Mouse Monoclonal antibody [A73-B/D12] recognizes NuMA
Tested Reactivity	Hu
Tested Application	IHC-Fr, IHC-P, IP, WB
Host	Mouse
Clonality	Monoclonal
Clone	A73-B/D12
Isotype	IgM
Target Name	NuMA
Species	Human
Immunogen	Raised against Ls 174T cell line of human origin
Conjugation	Un-conjugated
Alternate Names	SP-H antigen; Nuclear mitotic apparatus protein 1; NMP-22; NUMA; Nuclear matrix protein-22; NuMA protein

Application Instructions

Application table

Application	Dilution
IHC-Fr	Assay-dependent
IHC-P	Assay-dependent
IP	Assay-dependent
WB	Assay-dependent

Application Note	* The dilutions indicate recommended starting dilutions and the optimal dilutions or concentrations should be determined by the scientist.
Positive Control	Tonsil, Thymus, Spleen

Properties

Form	Liquid
Purification	Purified Antibody
Buffer	1X PBS and 0.1% Sodium azide
Preservative	0.1% Sodium azide
Concentration	0.2 mg/ml
Storage instruction	For continuous use, store undiluted antibody at 2-8°C for up to a week. For long-term storage, aliquot and store at -20°C or below. Storage in frost free freezers is not recommended. Avoid repeated

	freeze/thaw cycles. Suggest spin the vial prior to opening. The antibody solution should be gently mixed before use.
Note	For laboratory research only, not for drug, diagnostic or other use.

Bioinformation

Database links	GeneID: 4926 Human Swiss-port # Q14980 Human
Gene Symbol	NUMA1
Gene Full Name	nuclear mitotic apparatus protein 1
Background	This gene encodes a large protein that forms a structural component of the nuclear matrix. The encoded protein interacts with microtubules and plays a role in the formation and organization of the mitotic spindle during cell division. Chromosomal translocation of this gene with the RARA (retinoic acid receptor, alpha) gene on chromosome 17 have been detected in patients with acute promyelocytic leukemia. Alternative splicing results in multiple transcript variants. [provided by RefSeq, Nov 2013]
Function	Highly abundant component of the nuclear matrix where it may serve a non-mitotic structural role, occupies the majority if the nuclear volume. Required for maintenance and establishment of the mitotic spindle poles, functionning as a tether linking bulk microtubules of the spindle to centrosomes. May be involved in coordination of the alignment of the mitotic spindle to the cellular polarity axis, which is a prerequisite for asymmetric cell divisions. [UniProt]
Research Area	Cell Biology and Cellular Response antibody
Calculated Mw	238 kDa
PTM	Phosphorylation and dephosphorylation on Thr-2055 regulates the extent of cortical NUMA1 and the dynein-dynactin complex localization during mitotic metaphase and anaphase (PubMed:23921553). In metaphase, phosphorylation on Thr-2055 occurs in a kinase CDK1-dependent manner; this phosphorylation maintains low levels of cortical dynein-dynactin complex at metaphase, and hence proper spindle positioning (PubMed:7769006, PubMed:23921553, PubMed:24371089). In anaphase, dephosphorylated on Thr-2055 by phosphatase PPP2CA; this dephosphorylation stimulates its membrane association and with the dynein-dynactin complex its enrichment at the cell cortex, and hence robust spindle elongation (PubMed:23921553, PubMed:24371089). Probably also phosphorylated on Thr-2015 and Ser-2087 by CDK1; these phosphorylations may regulate its cell cortex recruitment during metaphase and anaphase (PubMed:23870127). Phosphorylated on Thr-1047, Ser-1769, Ser-1772, Ser-1789 and Ser-1834 by PLK1; these phosphorylations induce cortical dynein-dynactin complex dissociation from the NUMA1-GPSM2 complex and negatively regulates cortical dynein-dynactin complex localization (PubMed:22327364). ADP-ribosylated by TNKS at the onset of mitosis; ADP-ribosylation is not required for its localization to spindle poles (PubMed:16076287). O-glycosylated during cytokinesis at sites identical or close to phosphorylation sites, this interferes with the phosphorylation status (PubMed:20068230). Ubiquitinated with 'Lys-63'-linked polyubiquitin chains. Deubiquitination by the BRISC complex is important for the incorporation of NUMA1 into mitotic spindle poles and normal spindle pole function, probably by modulating interactions between NUMA1, dynein-dynactin complex and importin-beta.