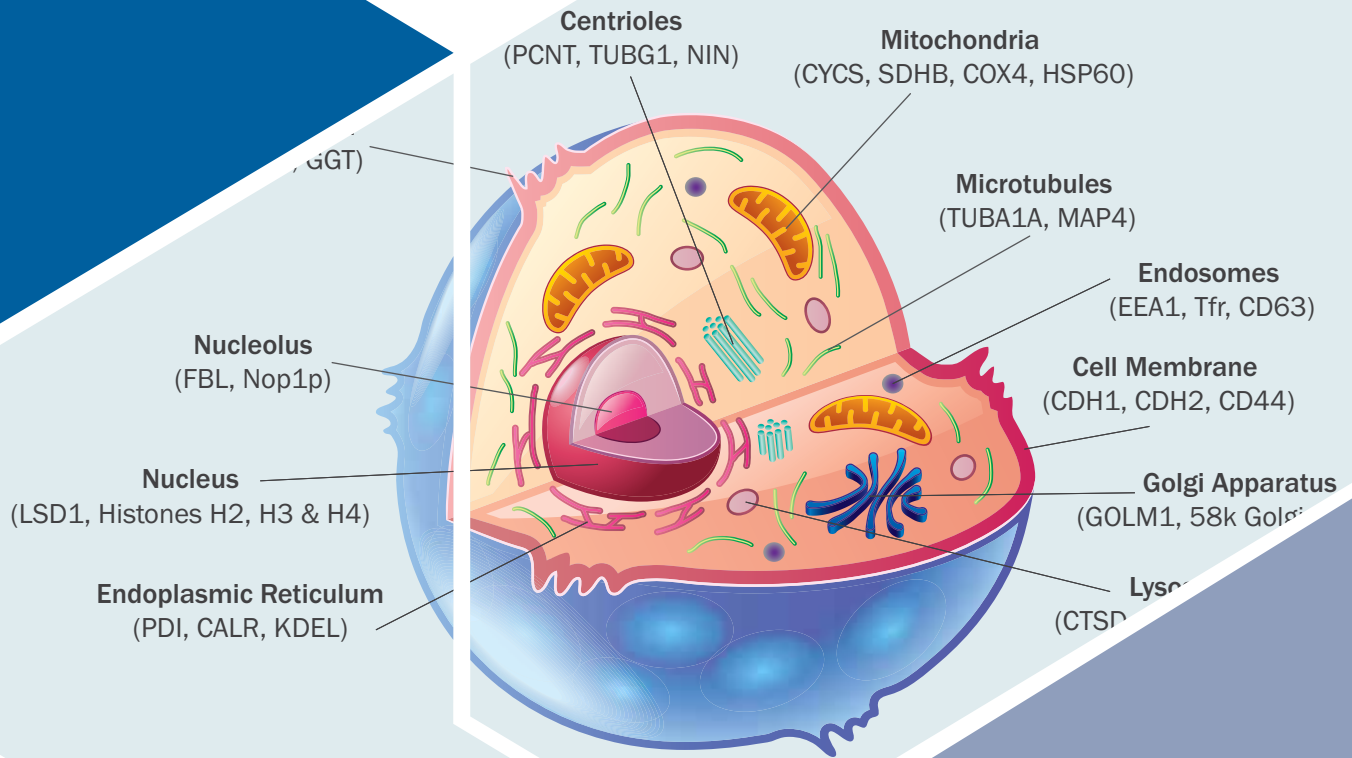


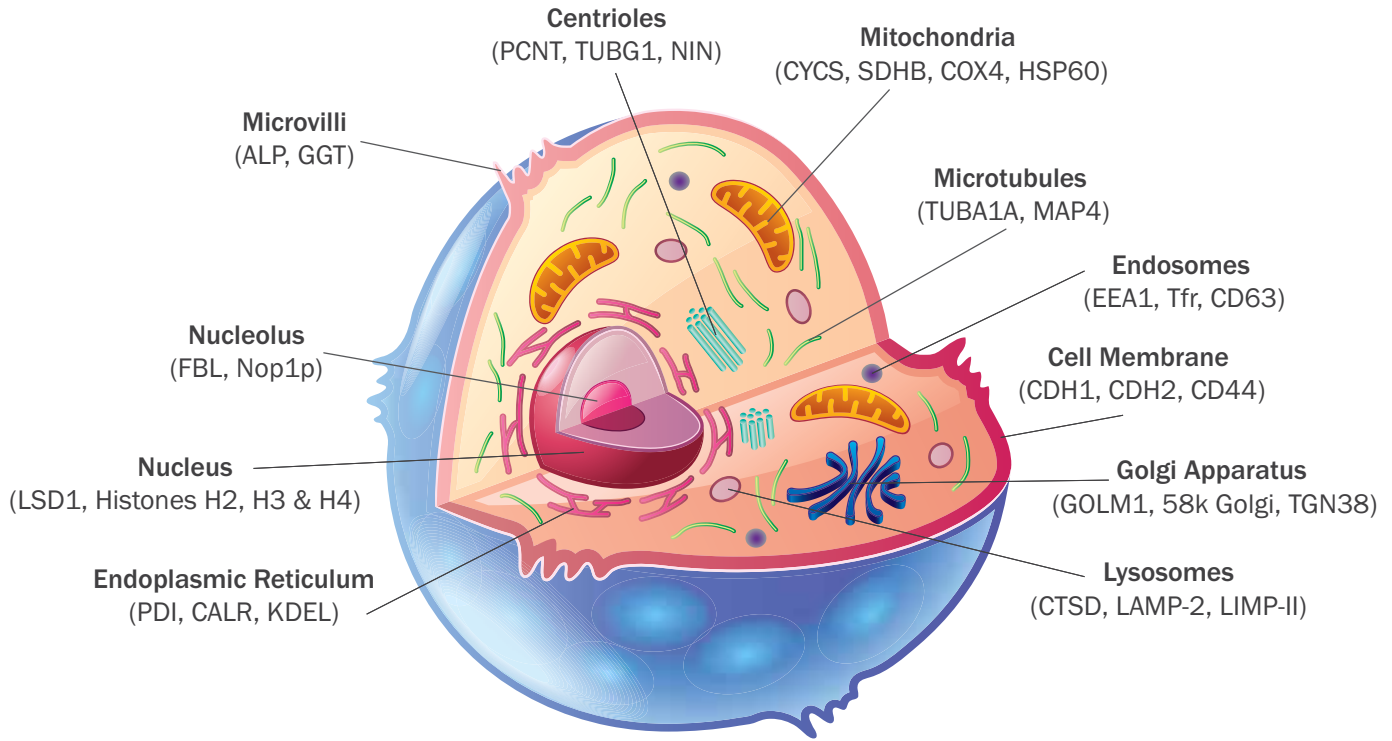
# Antibodies for Organelle Markers



# INTRODUCTION

Eukaryotic cellular components are organized into membrane-bound compartments called organelles. These structurally complex compartments serve specific biological roles and are crucial for proper cellular function. For example, mitochondria carry out cellular respiration, while lysosomes function in cellular digestion to break down biomolecules. The specialized function of each organelle is determined by the unique proteins they contain. Organelle-specific proteins can function as markers to identify organelles in cell biology immunoassays, as well as act as a tool to explore the subcellular localization of novel proteins. By immunostaining for the protein of interest along with an organelle marker, their co-localization confirms the subcellular localization of the target protein. In addition, organelle markers can be used in Western blot analysis to confirm the purity of various fractions in experiments involving cellular fractionation.

# Gold Standard Organelle Markers

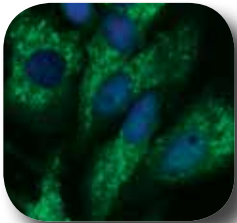


Novus Biologicals offers extensively validated, high quality antibodies for various organelle markers. Many of these products are cited in publications from top-notch biomedical research journals.

Some of the most popular Novus antibodies for organelle markers are:

## Autophagosomes Marker

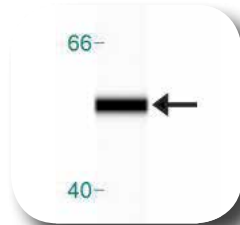
**LC3B/MAP1LC3B Antibody**  
**NB100-2220 (459 publications)**



ICC/IF analysis of 50  $\mu$ M chloroquine treated HeLa cells using LC3B antibody with Dylight 488 conjugated secondary antibody (green) and DAPI counterstaining (blue, nuclei).

## Microtubules Marker

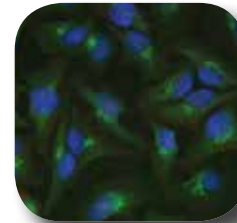
**alpha Tubulin Antibody**  
**NB100-690 (54 publications)**



Simple Western analysis of 1.0 mg/ml of HeLa cell lysate on 12-230 kDa separation system using alpha Tubulin Antibody (clone DM1A).

## Golgi Apparatus Marker

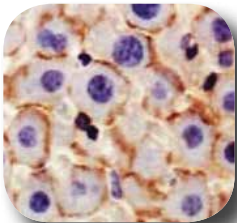
**58K Golgi Protein Antibody**  
**NB600-412 (18 publications)**



ICC/IF analysis of HeLa cells using 58K Golgi Protein antibody with Dylight 488 conjugated secondary antibody (green) and DAPI counterstaining (blue, nuclei).

## Adherens Junctions Marker

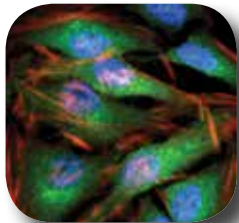
**N-Cadherin Antibody**  
**NBP1-48309 (20 publications)**



IHC-P analysis of a formalin fixed mouse liver tissue using N-Cadherin antibody (clone 13A9) with HRP-DAB detection and hematoxylin counterstaining.

## Lysosome Marker

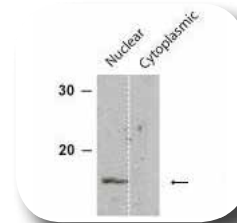
**LAMP2 Antibody**  
**NBP2-22217 (28 publications)**



ICC/IF analysis of HeLa cells using LAMP2 antibody with Dylight 488 conjugated secondary antibody (green). Actin and Nuclei were counterstained against Phalloidin 568 (red) and DAPI (blue) respectively.

## Nucleus Marker

**Histone H2B, member S Antibody**  
**NB100-56347 (11 publications)**



WB analysis of nuclear/cytoplasmic fractions of Drosophila using Histone H2B, member S antibody. The fractions were prepared using Novus Nuclear Extraction Kit (NBP2-29447; 21 Publications).

## Autophagosomes

Marker	Target	Catalog#	Host/Clonality	Applications	Species	Publications
Autophagosomes	LC3B/MAP1LC3B	NB100-2220	Rb/Poly	SW, WB, ELISA, ICC/IF, IHC-Fr, IHC-P, IP, PLA	Hu, Mu, Rt, Po, Ba, Bv, Ca, Ha, Pm, Ze	467
Autophagosomes	LC3B/MAP1LC3B	NB600-1384	Rb/Poly	SW, WB, EM, Flow, ICC/IF, IHC-Fr, IHC-P	Hu, Mu, Rt, Po, Bv, Ca, Pm, Ze	151
Autophagosomes	LC3/MAP1LC3A	NB100-2331	Rb/Poly	SW, WB, ELISA, Flow, ICC/IF, IHC-Fr, IHC-P, IP	Hu, Mu, Rt, Ca, Fi, Ze	163

## Cellular Junctions

Marker	Target	Catalog#	Host/Clonality	Applications	Species	Publications
Adherens Junctions	E-Cadherin	NBP2-19051	Mu/Mono	WB, ELISA, Flow, ICC/IF, IHC-P	Hu, Mu, Rt, Pm	3
Adherens Junctions	N-Cadherin	NBP1-48309	Mu/Mono	SW, WB, ICC/IF, IHC-P, IP	Hu, Mu, Rt	20
Adherens Junctions	P-Cadherin	NBP1-59222	Rb/Poly	WB, ICC/IF, IHC-P	Hu,	1
Adherens Junctions	VE-Cadherin	NB600-1409	Mu/Mono	WB, Flow, Func, ICC/IF, IHC-Fr, IP	Hu	1
Gap Junctions	Connexin 43	NB300-309	Rb/Poly	WB	Rt, Av	1
Tight Junctions	ZO1/TJP1	NBP1-85046	Rb/Poly	WB, ICC/IF, IHC-P	Hu, Mu	2
Desmosomes	Desmoglein-2	NBP1-85709	Rb/Poly	WB, ICC/IF, IHC-P	Hu	1

## Centrosome

Marker	Target	Catalog#	Host/Clonality	Applications	Species	Publications
Centrosome	Pericentrin	NB100-61071	Rb/Poly	ICC/IF, IHC-P, IP	Hu	3
Centrosome	gamma Tubulin	NB500-574	Mu/Mono	WB, ICC/IF	Hu, Mu, Rt, Po, Bv, Ch, PI	17

## Cytoskeleton

Marker	Target	Catalog#	Host/Clonality	Applications	Species	Publications
Actin Filaments	beta-Actin	NB100-56874	Rb/Poly	SW, WB, IHC-P	Hu, Mu, Po, Rt, In	49
Microtubules	alpha Tubulin	NB100-690	Mu/Mono	SW, WB, Flow, ICC/IF, IHC-Fr, IHC-P, IP	Hu, Mu, Rt, Po, Av, Bv, Ca, Ch, Ha, Dr, Fu, Gp, Pm, Rb, Xp, Ye	54
Microtubules	beta Tubulin	NB100-56459	Rb/Poly	SW, WB, IHC-P	Hu, Mu, Rt, Bv, Ca, Ch, Fe, Pm, Xp	6
Intermediate Filaments	Cytokeratin	NBP2-29429	Mu/Mono	WB, Flow, ICC/IF, IHC-Fr, IHC-P	Hu, Mu, Rt, Bv, Ca, Ch, Pm, Rb	9
Intermediate Filaments	Vimentin	NB300-223	Ch/Poly	WB, ICC/IF, IHC-Fr, IHC-P	Hu, Mu, Rt, Ca	17

## Endoplasmic Reticulum (ER)

Marker	Target	Catalog#	Host/Clonality	Applications	Species	Publications
ER	Calreticulin	NB600-101	Rb/Poly	SW, WB, B/N, DB, EM, ICC/IF, IHC-Fr, IP, PA	Hu, Mu, Rt, Bv, Ha, Pm	19
ER	Pdi1p	NBP1-05391	Mu/Mono	WB, ICC/IF	Ye	-
ER	PDI	NB300-517	Mu/Mono	WB, B/N, ELISA, Flow, ICC/IF, IHC-Fr, IHC-P, IP	Hu, Mu, Rt, Po, Bv, Ha, Pm, Rb	16
ER	KDEL	NBP1-97469	Mu/Mono	WB, EM, ELISA, Flow, ICC/IF, IHC-P, IP	Hu, Mu, Rt, Av, Ch, In, Ma, PI, Pm, Ye	22
ER Membrane	Calnexin	NB100-1965	Rb/Poly	SW, WB, ICC/IF, IHC-P, IP	Hu, Mu, Rt, Po, Av, Bv, Ch, Dr, Gp, Rb, Sh, Xp, Ze	7
ER Stress	GADD153	NB600-1335	Mu/Mono	SW, WB, GS, ICC/IF, IHC-P, IP	Hu, Mu, Rt, Pm	15
ER Stress	GRP78	NBP1-06274	Rb/Poly	SW, WB, Flow, ICC/IF	Hu, Mu, Rt, Ch, Sh	9

Novus also offers Endoplasmic Reticulum Enrichment/Extraction Kit (NBP2-29482; 14 Publications)

## Endosomes

Marker	Target	Catalog#	Host/Clonality	Applications	Species	Publications
Early Endosomes	EEA1	NBP1-30914	Rb/Poly	WB, DB, ICC/IF, IHC-P	Hu, Mu, Rt	3
Early Endosomes	EEA1	NBP2-36568	Mu/Mono	WB, IHC-P, Flow-IC	Hu, Mu	-
Early Endosomes	EEA1	NBP2-36569	Mu/Mono	WB, IHC-P, Flow-IC	Hu, Mu	-
Early Endosomes	Rab5a	NBP1-04340	Mu/Mono	WB, ELISA	Hu	-
Early Endosomes	Rab5a	NB120-13253	Rb/Poly	WB, ICC/IF, IHC-P, IP	Hu, Mu, Rt, Bv, Pm	8
Recycling Endosomes	TfR (Transferrin R)	NB100-64979	Rt/Mono	Flow, Func, ICC/IF, IHC-Fr, In vivo	Mu	5
Recycling Endosomes	TfR (Transferrin R)	NB200-585	Mu/Mono	WB, ICC/IF, IHC-P, FLOW	Mu, Rt	13
Recycling Endosomes	Rab11A	NB120-3612	Rb/Poly	WB	Hu, Pm	-
Late Endosomes	CD63	NBP2-36567	Rt/Mono	WB, Flow	Hu, Mu	-
Late Endosomes	CD63	NBP2-42225	Mu/Mono	WB, DB, EM, ELISA, Flow, Func, ICC/IF, IP	Hu	10
Late Endosomes	IGF-II R	NB300-514	Mu/Mono	WB, ELISA, Flow, ICC/IF, IHC-P, IP	Hu, Mu, Rt, Bv, Pm	6

## Golgi Apparatus

Marker	Target	Catalog#	Host/Clonality	Applications	Species	Publications
Golgi Apparatus	58K Golgi Protein	NB600-412	Mu/Mono	WB, ICC/IF, IHC-Fr, IHC-P	Hu, Mu, Rt, Bv, Ca, Ch	18
Golgi Apparatus	GOLM1	NBP1-50627	Rb/Poly	WB, ICC/IF	Hu, Mu	-
Golgi Apparatus	GM130	NBP1-89756	Rb/Poly	ICC/IF, IHC-P	Hu	1
trans-Golgi network	TGN38	NBP1-03495	Rb/Poly	WB, ICC/IF, IHC-P	Hu, Mu, Rt	3
trans-Golgi network	TGN38	NB300-575	Mu/Mono	WB, B/N, Flow, ICC/IF, IHC-P, IP	Hu, Mu, Rt, Ha, Mk, Rb	3
trans-Golgi network	TGN46	NBP1-49643	Rb/Poly	WB, ICC/IF, IHC-P	Hu	4
trans-Golgi network	Furin	NBP2-24687	Rb/Poly	IHC-P	Hu, Mu, Rt, Bv, Ca, Eq, Pm	-

## Lysosomes

Marker	Target	Catalog#	Host/Clonality	Applications	Species	Publications
Lysosomes	Cathepsin D	NB600-1295	Mu/Mono	WB, EM, ELISA, ICC/IF, IHC-P, MiAr	Hu	4
Lysosomes	LIMP2	NB400-129	Rb/Poly	WB, ICC/IF, IHC-P, IP	Hu, Mu, Rt, Ca, Pm	7
Lysosomes	LIMP2	NB400-102	Rb/Poly	WB, Flow, ICC/IF, IHC-P	Hu, Mu, Rt, Bv, Ha, Md	10
Lysosomes	LAMP-2/CD107b	NBP2-22217	Mu/Mono	SW, WB, Flow, ICC/IF, IHC-Fr, IHC-P	Hu	28
Lysosomes	LAMP-1/CD107a	NBP2-25155	Mu/Mono	WB, ICC/IF	Hu, Mu, Rt, Po, Bv	-
Lysosomes	LAMP-2/CD107b	NB100-77525	Rt/Mono	Flow, IHC-Fr, IP	Mu	7
Lysosomes	LAMP-1/CD107a	NB120-19294	Rb/Poly	WB, ICC/IF, IHC-P	Hu, Mu, Rt	15

## Mitochondria

Marker	Target	Catalog#	Host/Clonality	Applications	Species	Publications
Mitochondria	Cytochrome c	NB100-56503	Mu/Mono	WB, Flow, ICC/IF, IHC-P	Hu, Mu, Po, Ca, Dr, Eq, Ma, Rb	44
Mitochondria	Cytochrome c	NBP2-24872	Mu/Mono	B/N, IHC-Fr, IP	Hu, Mu, Rt	5
Mitochondria	SDHB	NBP1-54154	Rb/Poly	WB, ICC/IF, IHC-P	Hu, Mu	2
Mitochondria	Mitofilin	NB100-1919	Rb/Poly	WB, ICC/IF, IP, IHC-P	Hu, Mu, Rt, Ca, Fe	6
Mitochondria	COX4	NB110-39115	Rb/Poly	SW, WB, ICC/IF, IHC-P	Hu, Mu, Rt, Po, Bv, Pm	2
Mitochondria	HSP60	NBP1-77396	Rb/Poly	SW, WB, ICC/IF, IHC-P	Hu, Mu, Rt, Ha, Pm	-
Mitochondrial Matrix	MRPL40	NBP1-82620	Rb/Poly	WB, ICC/IF, IHC-P	Hu, Mu, Rt	2

## Nucleus

Marker	Target	Catalog#	Host/Clonality	Applications	Species	Publications
Nucleus	Histone H2BS	NB100-56347	Rb/Poly	WB, IHC-P	Hu, Mu, Rt, Ca, Ch, Dr, Ma, Ze	11
Nucleus	Histone H3	NB500-171	Rb/Poly	WB, ChIP, ICC/IF, IHC-P	Hu, Mu, Rt, Xp, Ye	5
Nucleus	Histone H4	NB100-56348	Rb/Poly	WB	Hu	1
Nucleus	LSD1	NB100-1762	Mu/Mono	SW, WB, ChIP, ELISA, IHC-P	Hu, Mu, Pm	8
Nucleus	MeCP2	NB100-56326	Rb/Poly	WB, ICC/IF, IHC-P	Hu, Mu	1
Nucleus	ASH2L	NB600-250	Rb/Poly	WB, ChIP, IHC-P, IP, PLA	Hu	12
Nuclear Envelope	Lamin B1	NB100-56403	Rb/Poly	WB	Hu	4
Nuclear Envelope	Lamin A + C	NB100-56649	Rb/Poly	WB, ICC/IF, Flow-IC	Hu	4
Nucleolus	Fibrillarin	NB300-269	Mu/Mono	WB, Flow, ICC/IF, IHC-Fr, IHC-P, IHC-WhMt	Hu, Mu, Rt, C. elegans, Ch, Dr, Pl, Ye	7
Nucleolus	NIFK	NB100-56660	Rb/Poly	WB, IHC-Fr	Hu	
Nucleolus	Fibrillarin	NBP2-46881	Ck/Poly	WB, ICC/IF	Hu	
Nuclear Speckle	SC35	NB100-1774	Mu/Mono	WB, EM, ELISA, ICC/IF, IP	Hu, Rt, Am, Dr	5
Heterochromatin	HP1 alpha	NBP2-24602	Rb/Poly	WB	Hu, Mu, Ca, Pm	-
Nuclear Pore	NUP50	NB100-1212	Gt/Poly	WB, IHC-P, ELISA	Hu	5
Nuclear Pore	Nup153	NB100-93329	Rb/Poly	WB, ICC/IF, IP	Hu	1
Centromere	HTR12	NBP1-18694	Rb/Poly	WB, ELISA, ICC/IF	Pl	1
Centromere	CENPA	NBP2-12892	Mu/Mono	WB, ICC/IF	Hu	

## Peroxisome

Marker	Target	Catalog#	Host/Clonality	Applications	Species	Publications
Peroxisome	Catalase	NBP2-24916	Rb/Poly	WB, IHC-P	Hu, Mu, Rt, Bv	4
Peroxisome	ACAA1	NBP1-85786	Rb/Poly	WB, ICC/IF, IHC-P	Hu, Mu, Rt	1
Proximal Membrane	PMP70	NBP1-20871	Gt/Poly	WB, IHC-P, ELISA	Hu, Rt	2

## Ribosomes

Marker	Target	Catalog#	Host/Clonality	Applications	Species	Publications
Ribosomes	RPL7A	NB100-2277	Rb/Poly	WB, IHC-P, IP, ICC/IF	Hu, Mu	3
Ribosomes	RPS6	NB100-1595	Rb/Poly	WB, IP, ICC/IF, IHC-P	Hu, Mu	2
Ribosomes	RPS3	NBP1-33691	Rb/Poly	WB, ICC/IF, IHC-P, IP	Hu, Mu, Rt	-

**Species Key:** Av (Avian), Ba (Bacteria), Bv (Bovine), Ca (Canine), Ch (Chicken), Dr (Drosophila), Eq (Equine), Fe (Feline), Fi (Fish), Fu (Fungi), Gp (Guinea Pig), Gt (Goat), Ha (Hamster), Hu (Human), In (Invertebrate), Le (Leech), Ma (Mammals), Md (Mustelid), Mu (Mouse), Pl (Plant), Pm (Non-human Primates), Po (Porcine), Rb (Rabbit), Rt (Rat), Sh (Sheep), Xp (Xenopus), Ye (Yeast), Ze (Zebrafish)

**Applications Key:** B/N (Blocking/Neutralization), ChIP (Chromatin Immunoprecipitation), DB (Dot Blot), GS (Gel Super Shift Assay), ELISA (ELISA Capture and/or Detection), EM (Electron Microscopy), Flow (Flow Cytometry), Flow-IC (Flow-Intracellular), Func (Functional), ICC/IF (Immunocytochemistry/Immunofluorescence), IHC-Fr (Immunohistochemistry-Frozen), IHC-P (Immunohistochemistry-Paraffin), IHC-WhMt (Immunohistochemistry-Whole Mount), IP (Immunoprecipitation), In vivo (in-vivo), MiAr (Microarray), PA (Protein Array), PLA (Proximity Ligation Assay), SW (Simple Western), WB (Western blot)

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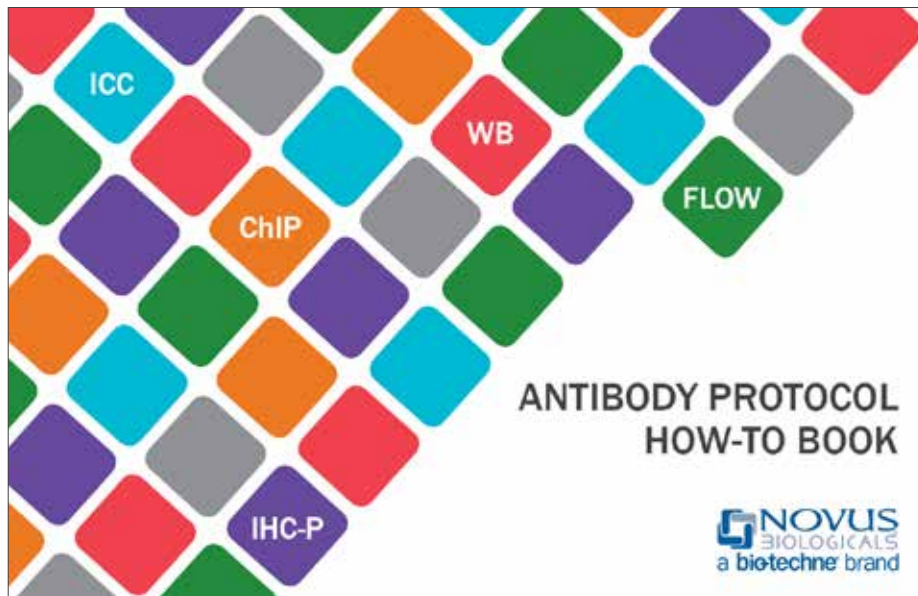
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