Clathrin Heavy Chain Monoclonal Antibody (X22)

Product Details	
Size	100 µL
Species Reactivity	Bovine, Hamster, Human, Mouse, Non-human primate, Rat
Published Species	Dog, Pig, Rat, Non-human primate, Hamster, Bovine, Human, Mouse
Host/Isotype	Mouse / IgG1
Class	Monoclonal
Type	Antibody
Clone	X22
Conjugate	Unconjugated
Immunogen	Purified human brain clathrin heavy chain.
Form	Liquid
Concentration	6 mg/mL
Purification	Protein A
Storage buffer	PBS
Contains	0.05% sodium azide
Storage conditions	-20° C, Avoid Freeze/Thaw Cycles
RRID	AB_2083179

Applications	Tested Dilution	Publications
Western Blot (WB)	1:100-1:500	18 Publications
Immunohistochemistry (IHC)	1:100	10 Publications
Immunocytochemistry (ICC/IF)	Assay-dependent	59 Publications
Flow Cytometry (Flow)	1/200	-
Immunoprecipitation (IP)	Assay-dependent	3 Publications
Neutralization (Neu)	-	2 Publications
Immunomicroscopy (IM)	Assay-dependent	-
Miscellaneous PubMed (Misc)	-	1 Publication

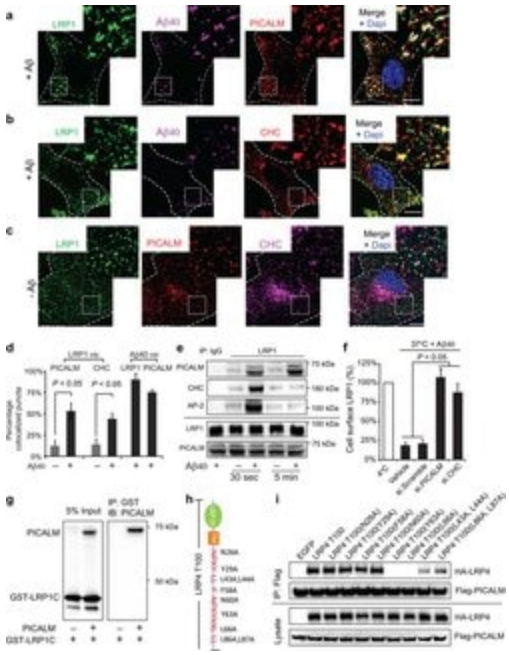
Product Specific Information

MA1-065 detects clathrin heavy chain in non-human primate, bovine, human, rat and mouse tissues as well as hamster (CHO) cells.

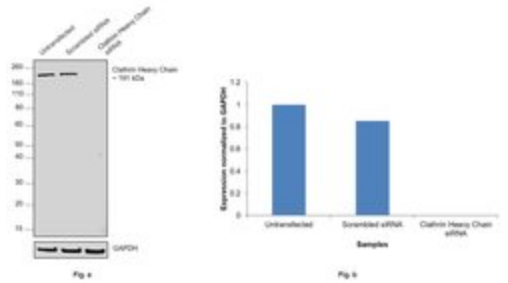
MA1-065 has been successfully used in Western blot, immunofluorescence, immunocytochemistry, and immunoprecipitation procedures. By Western blot, this antibody recognizes a single ~180 kDa protein representing the clathrin heavy chain from bovine brain extract. Immunoprecipitation of triskelions with MA1-065 allows both the clathrin heavy chain and the associated light chain polypeptides to be examined.

The MA1-065 immunogen is purified human brain clathrin heavy chain. Electron microscopy and proteolysis mapping demonstrate that MA1-065 binding occurs towards the central hub of the triskelion, N-terminal to the light chain binding regions.

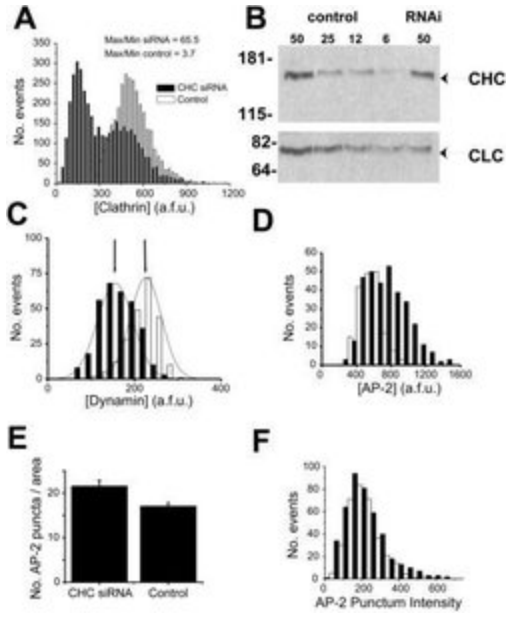
Advanced Verification Data



Clathrin Heavy Chain Antibody (MA1-065)
Figure 5 PICALM/clathrin-dependent endocytosis of Abeta-LRP1 complex by brain endothelial cells a-b , Colocalization of LRP1-Abeta40 complex with PICALM (a) and clathrin heavy chain (CHC) (b) in human brain endothelial cells (BEC) within 30 s of FAM-Abeta40 (250 nM) treatment. c , Immunostaining for LRP1, PICALM and CHC without Abeta (- Abeta). Dapi, nuclear staining (blue). Insets: higher magnification. Bar=10 um. d , Quantification of LRP1 puncta colocalized with PICALM in a, c and with CHC in b, c , and FAM-Abeta40 puncta colocalized with LRP1 and PICALM in a, b . Means +- s.d. from 3 primary isolates in triplicate. p<0.05 by Student's t-test. e , Coimmunoprecipitation of PICALM, CHC and clathrin adaptor protein alpha-adaptin (AP-2) by LRP1-specific antibody (IP: LRP1) in BEC 30 s or 5 min after stimulation with Abeta40 (1 nM); IgG, non-immune IgG. f , LRP1 internalization in control BEC (vehicle) and after transfection with si .Scramble RNA and/or si.RNAs targeting PICALM or CHC. Abeta40 (1 nM) was applied for 15 min at 4degC followed by 1 min at 37degC to initiate LRP1 internalization. Values at 4degC were taken as 100%. Means +- s.d. from 3 primary isolates in triplicate. p<0.05 by ANOVA followed by Tukey's posthoc tests. g , In vitro binding of human recombinant PICALM to GST-tagged LRP1 C-terminus fusion protein (GST-LRP1C). h , C-terminal mutants of the human LRP1 minigene (LRP4T100). i , Coimmunoprecipitation of HA-tagged C-terminal LRP1 mutants (LRP4T100) by an Cell treatment validation info.



Clathrin Heavy Chain Antibody (MA1-065)
Antibody specificity was demonstrated by siRNA mediated knockdown of target protein. HeLa cells were transfected with Clathrin Heavy Chain siRNA and decrease in signal intensity was observed in Western Blot application using Anti-Clathrin Heavy Chain Monoclonal Antibody (X22) (Product # MA1-065). Knockdown validation info.



Clathrin Heavy Chain Antibody (MA1-065)
In vitro S -nitrosylation of calpain-1 inhibits Ca 2+ -induced proteolysis of Ca 2+ regulatory proteins. (A) immunodetection of GSNO -induced S -nitrosylation of calpain-1 in tibialis anterior muscles. To check the assay specificity and ascertain whether GSNO treatment can result in S -nitrosylation of calpain-1, SNO - RAC was performed in the presence (+) and absence (-) of GSNO and Cu-Asc treatment. Positions of molecular mass markers are indicated on the left. (B) immunoblots of RyR, DHPR , and JP 1. Muscle homogenates were incubated in the presence (+) and absence (-) of GSNO and Ca 2+ . Total proteins on the membrane, which were used as a loading control, were visualized with Coomassie blue R staining. (C, D and E) means +- SEM (n = 5 for each treatment) of the contents of full-length RyR (arrow), DHPR , and JP 1, respectively. The contents of the three proteins were evaluated relative to the total proteins. The results are expressed as percentages of the values in samples treated without GSNO and Ca 2+ . a P < 0.05, versus T1. b P < 0.05, versus T2. c P < 0.05, versus T3. GSNO , S -nitrosoglutathione; Cu-Asc, CuCl and sodium ascorbate; DHPR , dihydropyridine receptor; JP 1, junctophilin-1; RyR, ryanodine receptor; SNO - RAC , resin-assisted capture of S -nitrosothiols; T, treatment. Knockdown validation info.

View more figures on thermofisher.com

93 References

Western Blot (18)

Frontiers in molecular neuroscience

An Aberrant Phosphorylation of Amyloid Precursor Protein Tyrosine Regulates Its Trafficking and the Binding to the Clathrin Endocytic Complex in Neural Stem Cells of Alzheimer's Disease Patients.

"Published figure using Clathrin Heavy Chain monoclonal antibody (Product # MA1-065) in Immunofluorescence"

Authors: Poulsen ET,Iannuzzi F,Rasmussen HF,Maier TJ,Enghild JJ,Jørgensen AL,Matrone C

Species
Pig

Dilution
Not Cited

Year
2020

Cell systems

Rare Disease Mechanisms Identified by Genealogical Proteomics of Copper Homeostasis Mutant Pedigrees.

"MA1-065 was used in Western Blotting to obtain mechanistic information by comparing proteomes of cells from individuals with rare disorders with proteomes from their disease-free consanguineous relatives."

Authors: Zlatic SA,Vrailas-Mortimer A,Gokhale A,Carey LJ,Scott E,Burch R,McCall MM,Rudin-Rush S,Davis JB,Hartwig C,Werner E,Li L,Petris M,Faundez V

Species
Human

Dilution
Not Cited

Year
2018

View more WB references on thermofisher.com

Immunohistochemistry (10)

The Journal of neuroscience : the official journal of the Society for Neuroscience

ELMOD1 Stimulates ARF6-GTP Hydrolysis to Stabilize Apical Structures in Developing Vestibular Hair Cells.

"MA1-065 was used in Immunohistochemistry-immunofluorescence to characterise ELMO domain-containing protein 1 control of trafficking."

Authors: Krey JF,Dumont RA,Wilmarth PA,David LL,Johnson KR,Barr-Gillespie PG

Species
Mouse

Dilution
1:250

Year
2018

The Journal of neuroscience : the official journal of the Society for Neuroscience

The X-linked mental retardation protein OPHN1 interacts with Homer1b/c to control spine endocytic zone positioning and expression of synaptic potentiation.

"Published figure using Clathrin Heavy Chain monoclonal antibody (Product # MA1-065) in Immunofluorescence"

Authors: Nakano-Kobayashi A,Tai Y,Nadif Kasri N,Van Aelst L

Species
Rat

Dilution
Not Cited

Year
2014

View more IHC references on thermofisher.com

More applications with references on thermofisher.com

ICC/IF (59) **IP (3)** **Neu (2)** **Misc (1)**