

#4796 Store at -20C

Clathrin Heavy Chain (D3C6) XP® Rabbit mAb



Cell Signaling
TECHNOLOGY®

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For Research Use Only. Not for Use in Diagnostic Procedures.

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
WB, IP, IF-IC	H M R Mk	Endogenous	190	Rabbit IgG	#Q00610	1213

Product Usage Information

Application

Western Blotting
Immunoprecipitation
Immunofluorescence (Immunocytochemistry)

Dilution

1:1000
1:100
1:50

Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at -20°C. Do not aliquot the antibody.

Specificity / Sensitivity

Clathrin Heavy Chain (D3C6) XP® Rabbit mAb detects endogenous levels of total clathrin protein.

Species predicted to react based on 100% sequence homology:

Pig

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Pro1663 of human clathrin heavy chain protein.

Background

Clathrin-coated vesicles provide for the intracellular transport of cargo proteins following endocytosis and during multiple vesicle trafficking pathways. Vesicles form at specialized areas of the cell membrane where clathrin and associated proteins form clathrin-coated pits. Invagination of these cell membrane-associated pits internalizes proteins and forms an intracellular clathrin-coated vesicle (1,2). Clathrin is the most abundant protein in these vesicles and is present as a basic assembly unit called a triskelion. Each clathrin triskelion is composed of three clathrin heavy chains and three clathrin light chains. Clathrin heavy chain proteins are composed of several functional domains, including a carboxy-terminal region that permits interaction with other heavy chain proteins within a triskelion, and a globular amino-terminal region that associates with other vesicle proteins (2). Adaptor proteins, such as AP2, epsin and EPS15, are responsible for the recruitment of vesicle proteins to sites of pit formation and the assembly of the clathrin-coated vesicle. Following vesicle invagination, the GTPase dynamin constricts the neck of the nascent vesicle to complete formation of the free, cytosolic vesicle (3,4).

Background References

1. Rodriguez-Boulant, E. et al. (2005) *Nat. Rev. Mol. Cell Biol.* 6, 233-247.
2. Mousavi, S.A. et al. (2004) *Biochem. J.* 377, 1-16.
3. Rappoport, J.Z. et al. (2004) *Traffic* 5, 327-237.
4. Brett, T.J. and Traub, L.M. (2006) *Curr. Opin. Cell Biol.* 18, 395-406.

Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

Western Blot Buffer

IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 5% w/v BSA, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

Applications Key

WB: Western Blotting **IP:** Immunoprecipitation **IF-IC:** Immunofluorescence (Immunocytochemistry)

Cross-Reactivity Key

H: human **M:** mouse **R:** rat **Hm:** hamster **Mk:** monkey **Vir:** virus **Mi:** mink **C:** chicken **Dm:** D. melanogaster
X: Xenopus **Z:** zebrafish **B:** bovine **Dg:** dog **Pg:** pig **Sc:** S. cerevisiae **Ce:** C. elegans **Hr:** horse
GP: Guinea Pig **Rab:** rabbit **All:** all species expected

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