

DESCRIPTION

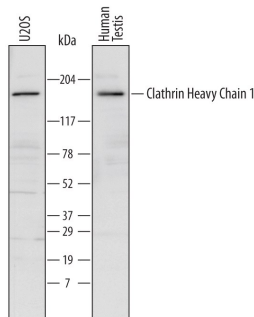
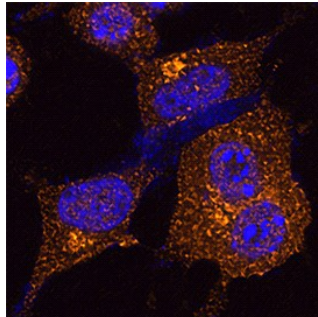
Species Reactivity	Human
Specificity	Detects human Clathrin Heavy Chain 1/CHC17 in direct ELISAs and Western blots. In direct ELISAs, less than 1% cross-reactivity with recombinant human CHC-22 is observed.
Source	Polyclonal Sheep IgG
Purification	Antigen Affinity-purified
Immunogen	<i>E. coli</i> -derived recombinant human Clathrin Heavy Chain 1/CHC17 Trp1521-Met1675 Accession # Q00610
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied as a 0.2 µm filtered solution in PBS.

APPLICATIONS

Please Note: Optimal dilutions should be determined by each laboratory for each application. *General Protocols* are available in the *Technical Information* section on our website.

	Recommended Concentration	Sample
Western Blot	1 µg/mL	See Below
Immunocytochemistry	5-15 µg/mL	See Below

DATA

<p>Western Blot</p>  <p>Detection of Human Clathrin Heavy Chain 1/CHC17 by Western Blot. Western blot shows lysates of U2OS human osteosarcoma cell line and human testis tissue. PVDF Membrane was probed with 1 µg/mL of Sheep Anti-Human Clathrin Heavy Chain 1/CHC17 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF6784) followed by HRP-conjugated Anti-Sheep IgG Secondary Antibody (Catalog # HAF016). A specific band was detected for Clathrin Heavy Chain 1/CHC17 at approximately 180 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 1.</p>	<p>Immunocytochemistry</p>  <p>Clathrin Heavy Chain 1/CHC17 in HeLa Human Cell Line. Clathrin Heavy Chain 1/CHC17 was detected in immersion fixed HeLa human cervical epithelial carcinoma cell line using Sheep Anti-Human Clathrin Heavy Chain 1/CHC17 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF6784) at 1.7 µg/mL for 3 hours at room temperature. Cells were stained using the NorthernLights™ 557-conjugated Anti-Sheep IgG Secondary Antibody (red, Catalog # NL010) and counterstained with DAPI (blue). Specific staining was localized to Clathrin coated vesicles. View our protocol for Fluorescent ICC Staining of Cells on Coverslips.</p>
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PREPARATION AND STORAGE

Reconstitution	Sterile PBS to a final concentration of 0.2 mg/mL.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
Stability & Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. <ul style="list-style-type: none"> • 12 months from date of receipt, -20 to -70 °C as supplied. • 1 month, 2 to 8 °C under sterile conditions after reconstitution. • 6 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND

Clathrin Heavy Chain 1/CHC17 (clathrin heavy chain 17; also CHC, CLTCL2 and CLTC) is a 170-180 kDa member of the clathrin heavy chain family of molecules. It is widely expressed, and serves at least two functions. First, it interacts with TACC3 and chTOG to form a complex that crosslinks microtubules making up K-fibers, and second, three Clathrin Heavy Chain 1/CHC17 molecules form a triskelion (Greek for "3 legged") structure with three clathrin light chains to create the polyhedral coat of coated pits. Human Clathrin Heavy Chain 1/CHC17 is 1675 amino acids (aa) in length. It contains an N-terminal domain that mediates protein-protein interactions (aa 2-479), a flexible linker region (aa 480-523), a distal segment (aa 524-638), a proximal region that interacts noncovalently with one CHC light chain (aa 639-1549), and a trimerization domain that mediates the formation of a noncovalent triskelion structure (aa 1550-1675). Although the predicted MW of Clathrin Heavy Chain 1/CHC17 is 191 kDa, it runs anomalously at 180 kDa in SDS-PAGE. Multiple utilized phosphorylation and acetylation sites exist. There are multiple potential splice forms. One shows a four aa insertion after Lys83, a second shows a seven aa insertion after Asp1611, and a third contains a four aa substitution for aa 1636-1675. Over aa 1521-1675, human and mouse Clathrin Heavy Chain 1/CHC17 are identical in aa sequence.