Human Clathrin Heavy Chain 2/CHC22 Antibody

Antigen Affinity-purified Polyclonal Sheep IgG
Catalog Number: AF6948

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human Clathrin Heavy Chain 2/CHC22 in direct ELISAs and Western blots. In direct ELISAs, less than 1% cross-reactivity with recombinant human CHC17 is observed.
Source	Polyclonal Sheep IgG
Purification	Antigen Affinity-purified
Immunogen	*E. coli*-derived recombinant human Clathrin Heavy Chain 2/CHC22 Trp1521-Glu1640 Accession # P53675
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 either lyophilized or as a 0.2 µm filtered solution in PBS.

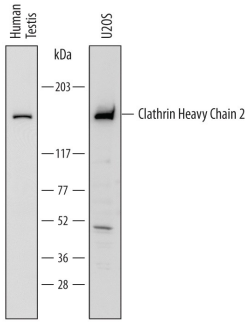
APPLICATIONS

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

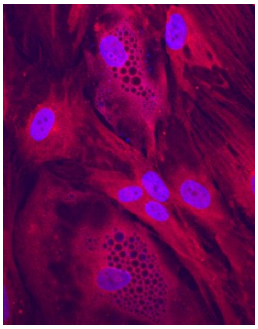
DATA

Western Blot



Detection of Human Clathrin Heavy Chain 2/CHC22 by Western Blot. Western blot shows lysates of human testis tissue and U2OS human osteosarcoma cell line. PVDF membrane was probed with 1 µg/mL of Sheep Anti-Human Clathrin Heavy Chain 2/CHC22 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF6948) followed by HRP-conjugated Anti-Sheep IgG Secondary Antibody (Catalog # HAF016). A specific band was detected for Clathrin Heavy Chain 2/CHC22 at approximately 170 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 1.

Immunocytochemistry



Clathrin Heavy Chain 2/CHC22 in Human Mesenchymal Stem Cells. Clathrin Heavy Chain 2/CHC22 was detected in immersion fixed human mesenchymal stem cells differentiated to adipocytes with Human/Mouse/Rat StemXVivo Adipogenic Supplement (Catalog # CCM011) using Sheep Anti-Human Clathrin Heavy Chain 2/CHC22 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF6948) at 10 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 cytoplasm. View our protocol for Fluorescent ICC Staining of Cells on Coverslips.

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.** ● 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

CHC22 (clathrin heavy chain on chromosome 22; also Clathrin Heavy Chain 2, CHL-22, CLTCL1, and CLTD) is a 170-190 kDa member of the clathrin heavy chain family of molecules. It is expressed in striated (skeletal and cardiac) muscle and adipocytes. CHC22 appears to participate in glucose transport by interacting with GLUT4 and GGA2, thus contributing to the formation of the GLUT4 storage compartment. CHC22 forms homotrimers, but does not interact with clathrin light chains. Human clathrin heavy chain 2/CHC22 is 1640 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 524-634), a "proximal" region (aa 639-1640), and a trimerization domain that mediates the formation of a non-covalent structure (aa 1551-1640). Multiple utilized phosphorylation and acetylation sites exist. There are three potential splice forms. One possesses a seven aa substitution for aa 1620-1640, a second shows a deletion of aa 1479-1535, and a third contains a combination of the afore-mentioned variations. Over aa 1521-1640, human CHC22 shares 60% aa identity with canine CHC22 and 73% aa identity with human CHC17. In rodent, CHC22 is not expressed as it is represented by a pseudogene.

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