

DESCRIPTION

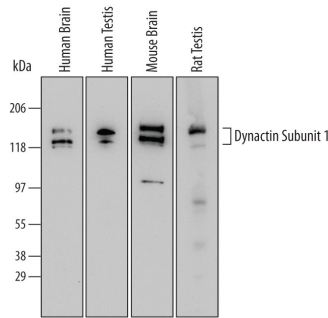
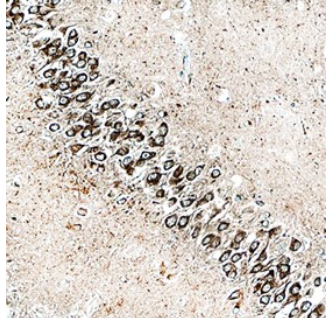
Species Reactivity	Human
Specificity	Detects human Dynactin Subunit 1/DCTN1 in direct ELISAs and human, mouse and rat Dynactin Subunit 1/DCTN1 in Western blots.
Source	Polyclonal Sheep IgG
Purification	Antigen Affinity-purified
Immunogen	<i>E. coli</i> -derived recombinant human Dynactin Subunit 1/DCTN1 Ala1145-Ser1278 Accession # Q14203
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
Immunohistochemistry	5-15 µg/mL	See Below

DATA

Western Blot	Immunohistochemistry
 <p>Detection of Human, Mouse, and Rat Dynactin Subunit 1/DCTN1 by Western Blot. Western blot shows lysates of human brain tissue, human testis tissue, mouse brain tissue, and rat testis tissue. PVDF Membrane was probed with 1 µg/mL of Human Dynactin Subunit 1/DCTN1 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF6657) followed by HRP-conjugated Anti-Sheep IgG Secondary Antibody (Catalog # HAF016). Specific bands were detected for Dynactin Subunit 1/DCTN1 at approximately 150 and 135 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 2.</p>	 <p>DCTN1 in Human Brain. DCTN1 was detected in immersion fixed paraffin-embedded sections of human Alzheimer's brain using Sheep Anti-Human/Mouse/Rat Dynactin Subunit 1/DCTN1 Antigen Affinity Purified Polyclonal Antibody (Catalog # AF6657) at 10 µg/mL overnight at 4 °C. Before incubation with the primary antibody, tissue was subjected to heat-induced epitope retrieval using Antigen Retrieval Reagent-Basic (Catalog # CTS013). Tissue was stained using the Anti-Sheep HRP-DAB Cell & Tissue Staining Kit (brown; Catalog # CTS019) and counterstained with hematoxylin (blue). Specific staining was localized to the cytoplasm of neurons. View our protocol for Chromogenic IHC Staining of Paraffin-embedded Tissue Sections.</p>

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

Dynactin subunit 1 (DCTN1; also DAP-150, p150-1A and p150glued) is a 145-150 kDa member of the dynactin 150 kDa subunit family of proteins. It is a noncovalently-linked homodimer that represents the largest subunit of the neuronal dynactin complex. DCTN1 serves as a bridge that binds dynein to microtubules. This facilitates the transport of molecules along microtubules by the motor molecule dynein. Human DCTN1 is 1278 amino acids (aa) in length. It possesses an N-terminal microtubule-association region that shows a CAP-Gly domain (aa 48-90) plus a BMBD segment (aa 115-155), and two coiled-coil domains that mediate dimerization (aa 213-547 and 943-1049). There are multiple splice variants. Two are 150 kDa in size; one is widely expressed (p150-1B) and shows a deletion of aa 132-151, while a second is rare (p150-1AB) and shows a deletion of aa 132-138. A third variant is 135 kDa in size and possesses a four aa substitution for aa 1-138. Other splice forms possess alternative start sites at Met19 and Met265 that may be coupled to a deletion of aa 1066-1070 and/or a 42 aa substitution for aa 1066-1278. Over aa 1145-1278, human DCTN1 shares 97% and 93% aa identity with mouse and rat DCTN1, respectively.