

DESCRIPTION

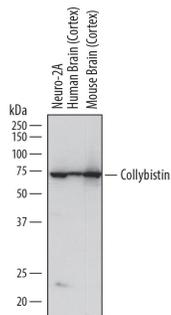
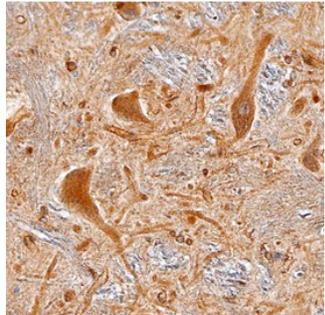
Species Reactivity	Human
Specificity	Detects human Collybistin/ARHGEF9 in direct ELISAs.
Source	Monoclonal Mouse IgG _{2B} Clone # 809309
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	<i>E. coli</i> -derived recombinant human Collybistin/ARHGEF9 Asn390-Lys516 Accession # O43307
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	2 µg/mL	See Below
Immunohistochemistry	8-25 µg/mL	See Below

DATA

<p>Western Blot</p>  <p>Detection of Human and Mouse Collybistin/ARHGEF9 by Western Blot. Western blot shows lysates of Neuro-2A mouse neuroblastoma cell line, human brain (cortex) tissue, and mouse brain (cortex) tissue. PVDF membrane was probed with 2 µg/mL of Mouse Anti-Human Collybistin/ARHGEF9 Monoclonal Antibody (Catalog # MAB7848) followed by HRP-conjugated Anti-Mouse IgG Secondary Antibody (Catalog # HAF007). A specific band was detected for Collybistin/ARHGEF9 at approximately 70 kDa (as indicated). This experiment was conducted under reducing conditions and using <i>Immunoblot Buffer Group 1</i>.</p>	<p>Immunohistochemistry</p>  <p>Collybistin/ARHGEF9 in Human Brain. Collybistin/ARHGEF9 was detected in immersion fixed paraffin-embedded sections of human brain (medulla) using Mouse Anti-Human Collybistin/ARHGEF9 Monoclonal Antibody (Catalog # MAB7848) at 25 µg/mL overnight at 4 °C. Tissue was stained using the Anti-Mouse HRP-DAB Cell & Tissue Staining Kit (brown; Catalog # CTS002) and counterstained with hematoxylin (blue). Specific staining was localized to neuronal cell bodies and processes. View our protocol for <i>Chromogenic IHC Staining of Paraffin-embedded Tissue Sections</i>.</p>
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PREPARATION AND STORAGE

Reconstitution	Sterile PBS to a final concentration of 0.5 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

Collybistin, also known as ARHGEF9, is an approximately 60 kDa cytoplasmic guanine nucleotide exchange factor. It is expressed in the brain and is upregulated at the onset of neuronal differentiation. Collybistin associates with Neuroligin-2, Gephyrin, and GABA receptor subunits to form a complex which is required for GABAergic synaptogenesis as well as hippocampal synaptic plasticity. Mutations in Collybistin are associated with a variety of neurological disorders including epilepsy, anxiety, aggression, mental retardation, and hyperplexia. Human Collybistin contains an SH3 domain (aa 8-67), a DH domain (aa 103-287), and a Pleckstrin homology domain (aa 318-426). Within aa 390-516, human Collybistin shares 97% and 57% aa sequence identity with mouse and rat Collybistin, respectively.