

DESCRIPTION

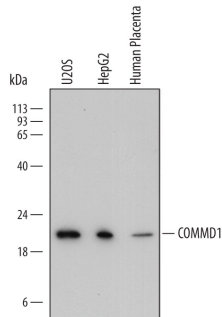
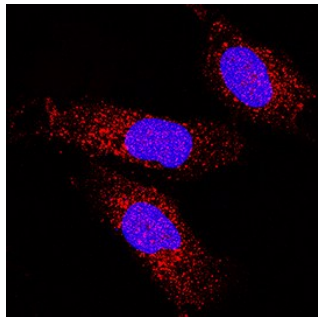
Species Reactivity	Human
Specificity	Detects human COMMD1 in direct ELISAs. In direct ELISAs, no cross-reactivity with recombinant human (rh) Attractin or rhCaspr1 is observed.
Source	Monoclonal Mouse IgG _{2B} Clone # 762203
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	<i>E. coli</i> -derived recombinant human COMMD1 Ser37-Ser135 Accession # Q8N668
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	0.2 µg/mL	See Below
Immunocytochemistry	8-25 µg/mL	See Below

DATA

<p>Western Blot</p>  <p>Detection of Human COMMD1 by Western Blot. Western blot shows lysates of U2OS human osteosarcoma cell line, HepG2 human hepatocellular carcinoma cell line, and human placenta tissue. PVDF membrane was probed with 0.2 µg/mL of Mouse Anti-Human COMMD1 Monoclonal Antibody (Catalog # MAB7526) followed by HRP-conjugated Anti-Mouse IgG Secondary Antibody (Catalog # HAF018). A specific band was detected for COMMD1 at approximately 20 kDa (as indicated). This experiment was conducted under reducing conditions and using <i>Immunoblot Buffer Group 1</i>.</p>	<p>Immunocytochemistry</p>  <p>COMMD1 in U2OS Human Cell Line. COMMD1 was detected in immersion fixed U2OS human osteosarcoma cell line using Mouse Anti-Human COMMD1 Monoclonal Antibody (Catalog # MAB7526) at 8 µg/mL for 3 hours at room temperature. Cells were stained using the NorthernLights™ 557-conjugated Anti-Mouse IgG Secondary Antibody (red; Catalog # NL007) and counterstained with DAPI (blue). Specific staining was localized to cytoplasm and nuclei. View our protocol for <i>Fluorescent ICC Staining of Cells on Coverslips</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

COMMD1, also known as MURR1 and the copper toxicosis gene product, is a ubiquitously expressed 21 kDa copper binding protein. It contains an N-terminal domain (aa 1-121) and C-terminal domain (aa 125-190) which are separated by a protease sensitive site. It forms high molecular weight oligomeric complexes both in solution and in association with phospholipid membranes. COMMD1 is found in the nucleus and cytoplasm as well as in endocytic vesicle membrane fractions. It binds and regulates the activity of a variety of proteins including the copper transporter Wilson disease protein (ATP7B), the delta ENaC epithelial cell sodium channel, the cystic fibrosis transmembrane regulator (CFTR), superoxide dismutase 1 (SOD1), XIAP, HIF-1 alpha, and Cullin RING ubiquitin ligases. COMMD1 promotes the ubiquitination and degradation of the RelA subunit of NFκB, thereby inhibiting its chromatin association and nuclear targeting as well as the replication of HIV in resting T cells. Within aa 37-135, human COMMD1 shares 94% aa sequence identity with mouse and rat COMMD1.