Human CDO Antibody

Antigen Affinity-purified Polyclonal Sheep IgG
Catalog Number: AF4384

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human CDO in direct ELISAs and Western blots. In direct ELISAs and Western blots, approximately 50% cross-reactivity with recombinant mouse CDO is observed.
Source	Polyclonal Sheep IgG
Purification	Antigen Affinity-purified
Immunogen	Mouse myeloma cell line NS0-derived recombinant human CDO Asp26-Pro943 (Leu669Ile) Accession # NP_058648
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.

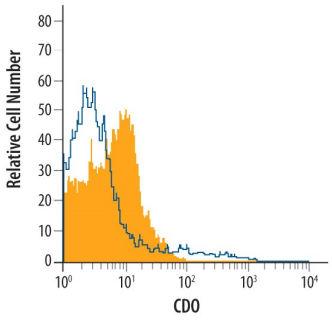
APPLICATIONS

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	0.1 µg/mL	Recombinant Human CDO (Catalog # 4384-CD)
Flow Cytometry	2.5 µg/10^6 cells	See Below
Immunocytochemistry	5-15 µg/mL	See Below
CyTOF-ready	Ready to be labeled using established conjugation methods. No BSA or other carrier proteins that could interfere with conjugation.	

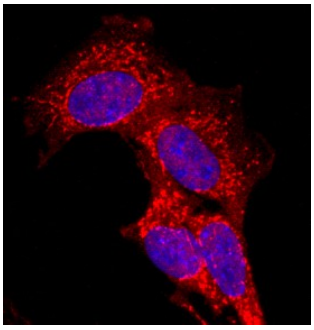
DATA

Flow Cytometry



Detection of CDO in C2C12 Mouse Cell Line by Flow Cytometry. C2C12 mouse myoblast cell line was stained with Sheep Anti-Human CDO Antigen Affinity-purified Polyclonal Antibody (Catalog # AF4384, filled histogram) or control antibody (Catalog # 5-001-A, open histogram), followed by NorthernLights™ 557-conjugated Anti-Sheep IgG Secondary Antibody (Catalog # NL010).

Immunocytochemistry



CDO in C2C12 Mouse Cell Line. CDO was detected in immersion fixed C2C12 mouse myoblast cell line using Sheep Anti-Human CDO Antigen Affinity-purified Polyclonal Antibody (Catalog # AF4384) 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 cell membranes. View our protocol for Fluorescent ICC Staining of Cells on Coverslips.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.2 mg/mL in sterile PBS.
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.

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BACKGROUND

CDO (CAM-related/down-regulated by oncogenes, also CDON; pronounced “kid-oh”) is a 190 kDa member of the Immunoglubulin (Ig) superfamily, Ig/Fibronectin (FN) type III repeat family of cell surface proteins (1). Human CDO is a type I transmembrane (TM) glycoprotein. It is synthesized as a 1287 amino acid (aa) precursor that contains a 25 aa signal sequence, a 938 aa extracellular domain (ECD), a 21 aa TM segment and a 303 aa cytoplasmic region (1, 2). The ECD contains five C2-type Ig-like domains, followed by three FN type III repeats. The first FN repeat (aa 577-673) is known to bind numerous cadherins, while the third (or juxtramembrane) FN type III repeat (aa 826-923) binds SHH (3, 4). The intracellular region is believed to signal through various bHLH transcription factors (2). One alternate splice form is reported that shows a deletion of aa 1212-1234 in the cytoplasmic tail. The ECD of human CDO is 85% aa identical to mouse CDO ECD. CDO is found on muscle precursor and neural progenitor cells of the embryo (5, 6). It likely promotes muscle differentiation, and contributes to axon guidance and neuronal patterning (2, 7, 8, 9). These effects may be mediated through two different receptor complexes. On muscle precursors, CDO apparently acts as both a coordinating and signaling subunit. Here, it integrates N- and M-cadherin, neogenin, netrin-3 and BOC into a cis-oriented receptor complex (2). While this complex has no identified ligand, intercellular cadherin interactions or netrin, may be enough to trigger CDO/cadherin/neogenin signaling. On axons, CDO may participate in a poorly-defined receptor complex minimally composed of CDO, BOC and Gas1 that binds SHH, and interacts with PTCH1 (7, 8, 10).

References:

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