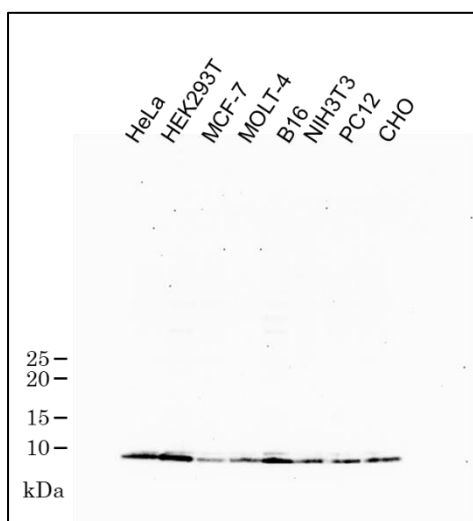


## Anti-NDUFA4 antibody, mouse monoclonal (#13)

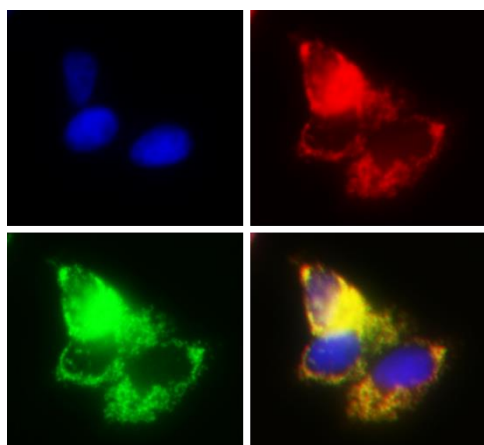
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|--|--|
| <b>Product code</b>  | 74-315   |
| <b>Size</b>  | 100 µg   |
| <b>Storage</b>   | -20°C  |
| <b>Concentration</b>   | 1.0 mg/ml  |
| <b>Buffer</b>  | PBS- with 50% glycerol   |
| <b>Purity</b>  | Purified IgG fraction with protein A from hybridoma cell culture medium  |
| <b>Immunogen</b>   | Purified recombinant MBP-mouse NDUFA4 polypeptide from 55 to 82 aa.  |
| <b>Isotype</b>   | mouse IgG1κ  |
| <b>Reactivity</b>  | human, mouse, rat, hamster   |
| <b>Special notes</b>   | Specificity has been validated by Immunofluorescence staining with mitochondria-specific fluorescent dye (Fig. 2)  |
| <b>Application</b>   | 1. Western blotting (dilution: 1/1000) Fig.1<br>2. Immunofluorescence staining (dilution: 1/10-1/1000) Fig. 2  |
| <b>Background</b>  | <p>Component of the cytochrome c oxidase, the last enzyme in the mitochondrial electron transport chain which drives oxidative phosphorylation. The respiratory chain contains 3 multisubunit complexes succinate dehydrogenase (complex II, CII), ubiquinol-cytochrome c oxidoreductase (cytochrome b-c1 complex, complex III, CIII) and cytochrome c oxidase (complex IV, CIV), that cooperate to transfer electrons derived from NADH and succinate to molecular oxygen, creating an electrochemical gradient over the inner membrane that drives transmembrane transport and the ATP synthase. Cytochrome c oxidase is the component of the respiratory chain that catalyzes the reduction of oxygen to water. Electrons originating from reduced cytochrome c in the intermembrane space (IMS) are transferred via the dinuclear copper A center (CU(A)) of subunit 2 and heme A of subunit 1 to the active site in subunit 1, a binuclear center (BNC) formed by heme A3 and copper B (CU(B)). The BNC reduces molecular oxygen to 2 water molecules using 4 electrons from cytochrome c in the IMS and 4 protons from the mitochondrial matrix (PubMed:<a href="#">22902835</a>).</p> <p>NDUFA4 is required for complex IV maintenance (PubMed:<a href="#">22902835</a>).</p> |
| <b>Data Link</b>   | UniProt <a href="#">O00483</a> (NDUA4_HUMAN)   |
| Please note: All products are FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES. NOT FOR MILITARY USE. |  |

**Data Images:** 74-315 Anti-human NDUFA4 antibody, mouse monoclonal (#13)



**Fig 1. Western blotting with anti-NDUFA4 antibody (#13)**

10 µg of indicated cell lysates was electrophoresed in a 12.5% PAAG and transferred to a PVDF membrane with a wet blotter. This filter was masked with 5% skim milk and 1µg/ml anti-NDUFA4 antibody (#13), 0.2 µg/ml anti-mIgG-H+L-HRP (ab205719) and ECL Western Blotting Detection Reagents (#RPN2109, Amersham)



**Fig 2. Immunofluorescence staining with anti-NDUFA4 antibody (#13)**

MCF-7 cells were stained with mitochondria-specific fluorescent dye (red) (MT15, Dojindo) and fixed by 4% PFA. Anti-NDUFA4 antibody (#13) was reacted at 1/10 dilution as primary antibody and anti-IgG (HL) Alexa 488 conjugate was reacted at 1/2000 dilution as secondary antibody (green). Nuclei were stained by DAPI (blue).