



Anti-Complex I Monoclonal Antibody

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| CATALOG #: | 438800 |
| COMPONENTS: | 100 µg monoclonal antibody |
| APPLICATIONS: | Immunoprecipitation. Not recommended for Western blotting or Immunohistochemistry. |
| CLONE ID OF MONOCLONAL ANTIBODY (mAb): | 20D1AB7 |
| SPECIES CROSS-REACTIVITY: | human, bovine, mouse |
| HOST SPECIES AND ISOTYPE: | Mouse IgG2b, k |
| IMMUNOGEN: | Bovine Heart Complex I |
| CONCENTRATION: | 1 mg/mL in Hepes-Buffered Saline (HBS) with 0.02% sodium azide as a preservative. |
| SUGGESTED WORKING CONCENTRATION: | 100 µg mAb can capture at least 25 µg complex I from 1 mg solubilized bovine heart mitochondria. |
| mAb PURITY: | Near homogeneity as judged by SDS-PAGE. The antibody was produced <i>in vitro</i> using hybridomas grown in serum-free medium, and then purified by biochemical fractionation. |
| STORAGE CONDITIONS: | Store at 4°C. Do not freeze. |
| COUNTRY OF ORIGIN: | USA |

BACKGROUND:

Complex I, or NADH ubiquinone oxidoreductase, is a large protein complex of 950,000 Da molecular weight made up by 45 to 46 different subunits. A total of seven of the subunits of the complex are encoded by mitochondrial DNA, while the remainder subunits are nuclear encoded, which are translated in the cytosol and translocated into the organelle for assembly at the inner membrane.

The enzyme complex catalyses electron entry from NADH via a flavin (FMN) and several non-heme iron centers. Complex I is sensitive to a wide range of inhibitors, many of which are pesticides or other common environmental toxins, such as rotenone. Complex I dysfunction is a common cause of genetic OXPHOS defects. Altered functioning of this complex is also thought to contribute to several neurological disorders including Parkinson's disease and schizophrenia. Also, there is evidence of Complex I involvement in diabetes.

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Related Products

| <i>Product</i> | <i>Conjugate</i> | <i>Cat. No.</i> |
|-----------------------------|------------------|-----------------|
| Protein A | Sepharose 4B | 10-1041 |
| rec-Protein G | Sepharose 4B | 10-1241 |
| ZyMAX™ Goat anti-rabbit IgG | Unconjugated | 81-6100 |
| ZyMAX™ Goat anti-mouse IgG | Unconjugated | 81-6500 |

Secondary Antibody Conjugates

| <i>Conjugate</i> | <i>Goat anti-rabbit IgG (H+L)</i> | <i>Goat anti-mouse IgG (H+L)</i> | <i>Ex/Em*</i> | <i>Fluorescence similar to--</i> |
|------------------|-----------------------------------|----------------------------------|---------------|----------------------------------|
| Alexa Fluor® 488 | A11008 | A11001 | 495/519 | FITC |
| Alexa Fluor® 555 | A21428 | A21422 | 555/565 | Cy3 |
| Alexa Fluor® 594 | A11012 | A11005 | 590/617 | Texas Red |
| Alexa Fluor® 647 | A21244 | A21235 | 650/668 | Cy5 |
| HRP | 81-6120 | 81-6520 | NA** | NA |
| AP | 81-6122 | 81-6522 | NA | NA |
| Biotin | B2770 | B2763 | NA | NA |

*Excitation/emission (nm); **Not applicable

For additional secondary antibody conjugates, visit www.invitrogen.com/antibodies

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