DROPLET DIGITAL™ PCR (DDPCR™)

BIO-RAD

What *do you* Gene?

Cytochrome B (CYTB)

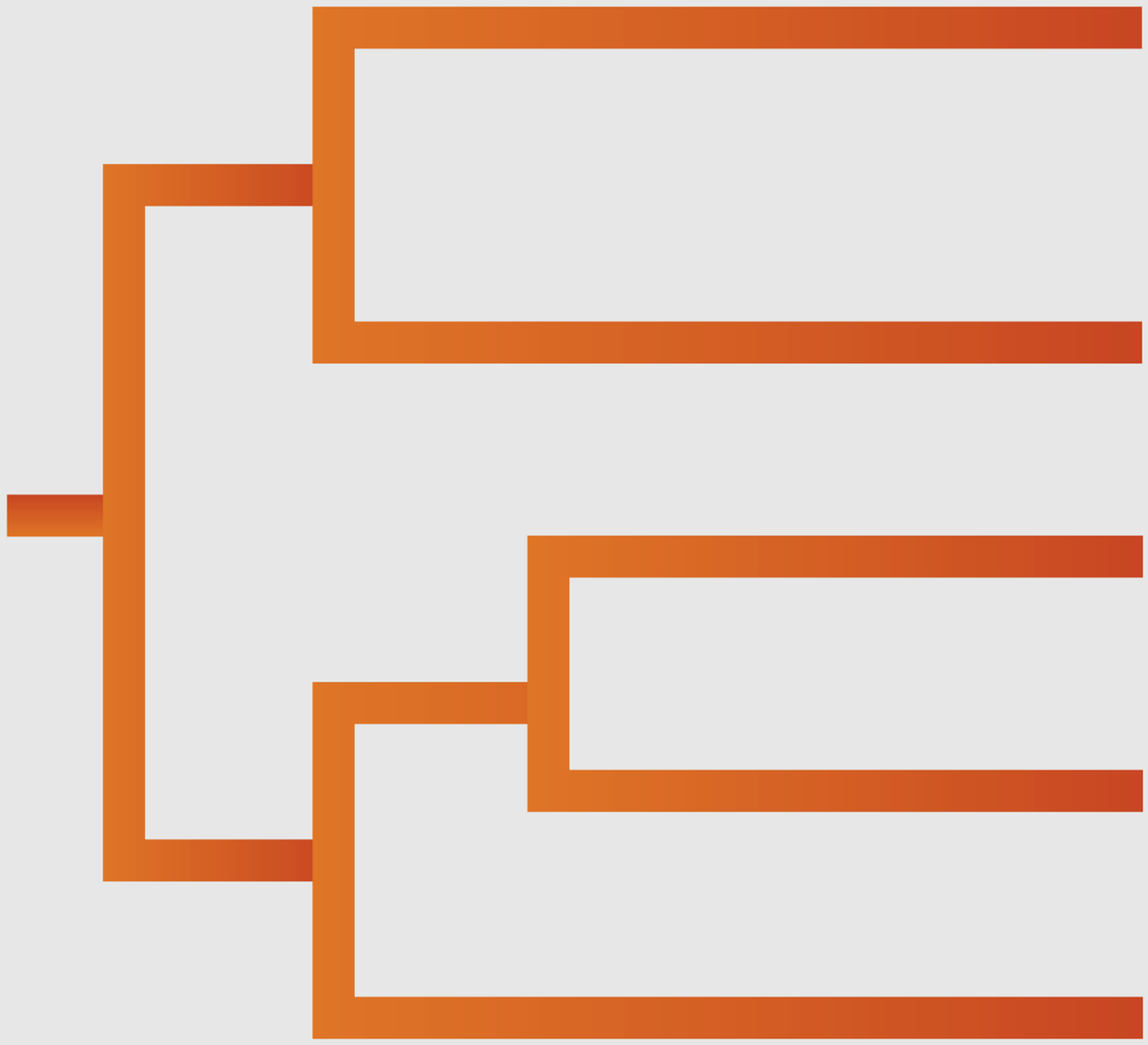
The Species Differentiator

WHAT IS IT?

Cytochrome B (CYTB) is found in the mitochondria of eukaryotic cells.

WHAT IS IT?

It is commonly used to determine phylogenetic relationships between organisms.



WHAT IS IT?

It has been used to assign newly described species to a genus as well as to deepen the understanding of evolutionary relationships.

CYTB AND ENVIRONMENTAL DNA (eDNA) DETECTION

MT-CYB gene assays have been developed to successfully detect manatee eDNA in vulnerable manatee species.

CYTB AND ENVIRONMENTAL DNA (eDNA) DETECTION

Cytochrome B mutations have resulted in activity intolerance in human patients.

eDNA

DROPLET DIGITAL PCR (ddPCR) PRODUCTS FROM BIO-RAD

ddPCR was used to detect eDNA because of its absolute quantification, sensitivity, and ability to improve accuracy through the partitioning of eDNA samples.

Visit **bio-rad.com/digital-assays** for more information on ddPCR assays. For research use only.

References:

Blakely EL et al. (2005). A mitochondrial cytochrome b mutation causing severe respiratory chain enzyme deficiency in humans and yeast. FEBS J 272, 3,583–3,592.

Castresana J. (2001). Cytochrome b phylogeny and the taxonomy of Great Apes and mammals. Mol Biol & Evol 4(18), 465-471.

Hunter ME et al. (2018). Surveys of environmental DNA (eDNA): a new approach to estimate occurrence in vulnerable manatee populations. Endang Species Res 35, 101–111.

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