3.7: SUPER ANIMAL DNA DECODER

Resource B: Protein Information Sheet

Amino Acid Sequence	Protein Name	Protein Function
M - R - E - W - A - E - P - STOP	**Dsup (Damage Suppressor)**	Protects DNA from damage, especially from radiation.
M - P - E - W - V - K - G - STOP	**Heat Shock Protein 70**	Helps stabilize other proteins in the body so they don't fall apart in extreme heat.
M - G - A - A - G - K - G - STOP	**Luciferace**	Reacts with another molecule to produce light
M - K - S - A - G - S - E - STOP	**mTOR**	Helps guide cells to grow and repair damage. It tells the body where to rebuild tissue and how to regrow complex body parts.
M - R - L - P - W - Q - G - STOP	**Myosin**	Helps muscles build up and release energy very fast, like a tightly pulled slingshot snapping forward. It makes super-powerful movements possible.
M - D - Y - R - R - S - A - STOP	**Reflectin**	Helps cells in the skin change how they reflect light. It can rearrange itself to create shiny, shifting colors when triggered by nerves.
M - T - G - R - S - G - D - STOP	**Synaptotagmin**	Helps send fast signals from nerves to small muscles, making quick, accurate aiming possible. It's used in movements that need perfect timing.
M - G - Q - L - R - N - W - STOP	**Voltage-Gated Sodium Ion Channel Protein**	Controls a "gate" that allows electricity to flow through the cell membrane, which helps the body build up and release strong electric bursts.

Note: The proteins described above are real proteins that perform the described functions. However, the DNA and amino acid sequences are not authentic; simplified sequences have been provided for the purposes of this lesson.

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