KemTRACE® CHROMIUM
Essential to you and your operation.

MODE OF ACTION

KemTRACE® Chromium is a highly bioavailable, organic source of chromium that helps improve glucose utilization for increased cellular energy and function. This results in better animal maintenance, growth and immunity.

KemTRACE Chromium is supported by more than 20 years of Kemin research and is the only U.S. Food and Drug Administration-reviewed form of chromium propionate.

What can animals do with more glucose?

- Improve immune function
- Withstand effects of heat/cold stress
- Optimize performance during high metabolic demands
- Increase protein accretion
- Increase feed efficiency

Insulin is the key

Insulin plays a key role in optimum cell function by acting as a "key" in the lock to the door that allows glucose into the cell. Chromium supplementation primarily acts to improve insulin sensitivity, so more glucose can enter the cell. The additional glucose allows more energy to be available for proper cell function.

HOW KemTRACE® CHROMIUM WORKS

ACTIVATES INSULIN RECEPTORS › MORE GLUCOSE ENTERS CELL › MORE ENERGY AVAILABLE

KEMIN®

Effect of chromium supplementation on GLUT4 transporters

GLUT4 is the principal glucose transporter, responsible for facilitating the movement of glucose into the cell.[1] A recent study found that *longissimus* muscle biopsies from cattle supplemented chromium propionate had an increase in internalized GLUT4s after a 147-day feeding period (Figure 1),[2] which indicated these animals had more sufficient insulin sensitivity compared to the controls at day 147. The decrease of GLUT4 density on day 147 in the control animals has been an indication of decreased insulin sensitivity or insulin resistance occurring.

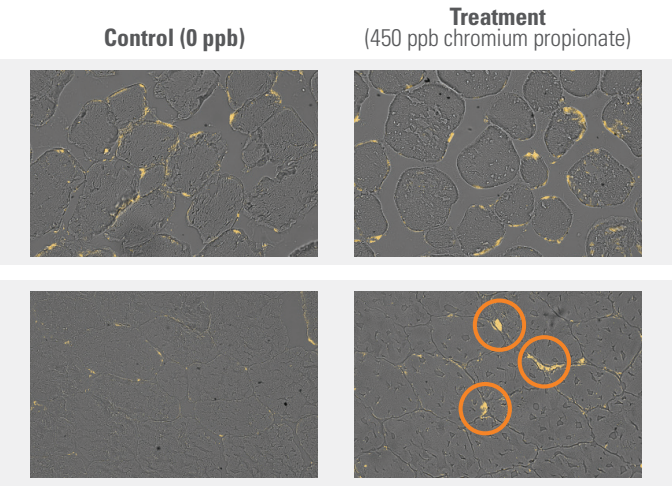
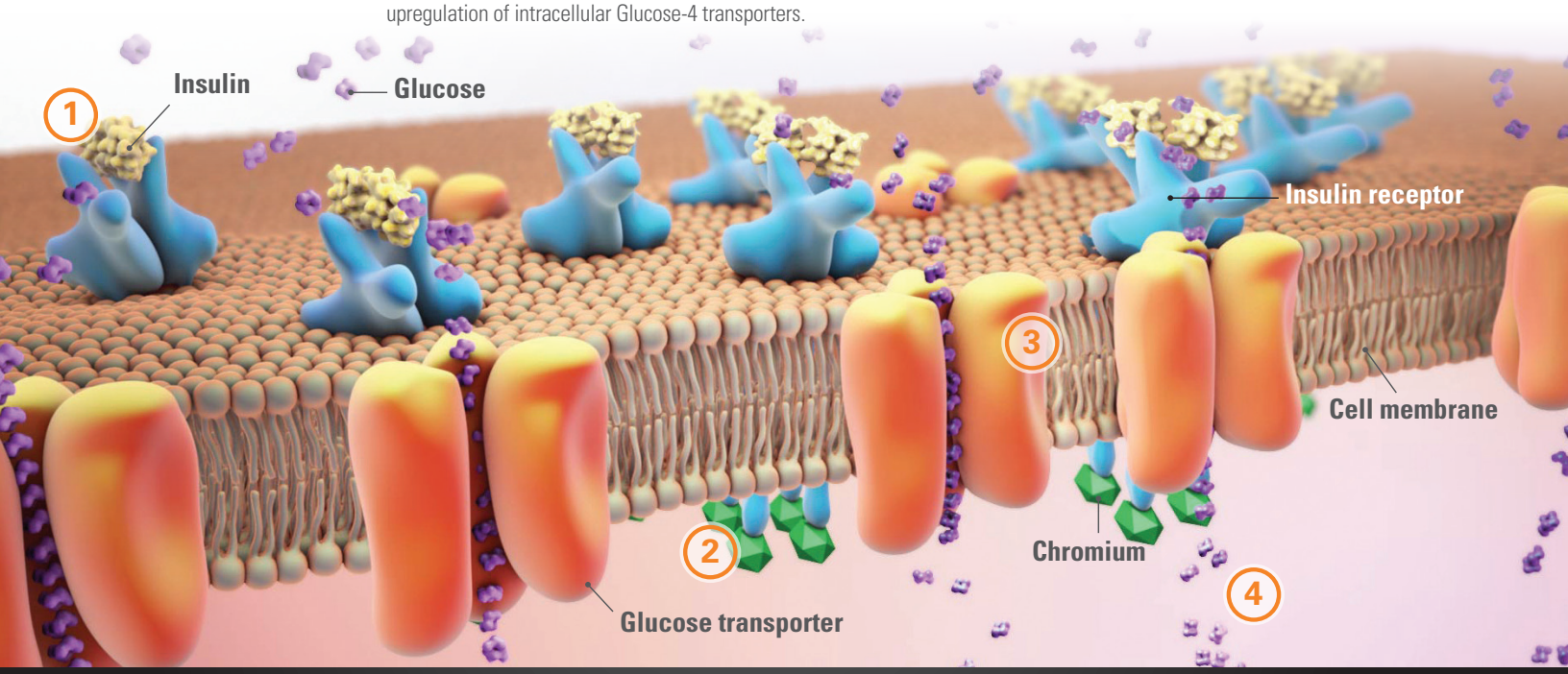


Figure 1: *Longissimus* muscle biopsies of feedlot steers supplemented with chromium propionate throughout the feeding period. (Yellow indicates GLUT4 receptors.)[3]

KemTRACE® Chromium mode of action

1. Insulin stimulates glucose uptake by cells.[3]
2. Readily available chromium from KemTRACE Chromium allows for increased glucose uptake by muscle cells through stabilization of the insulin receptor and subsequent upregulation of intracellular Glucose-4 transporters.
3. Greater glucose uptake by muscle cells increases protein synthesis.[1]
4. Increased protein synthesis may result in heavier carcass weight.[1]



KEMIN IS THE SCIENCE BEHIND HEALTHIER CATTLE. kemin.com/cattle | #TheScienceBehind

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