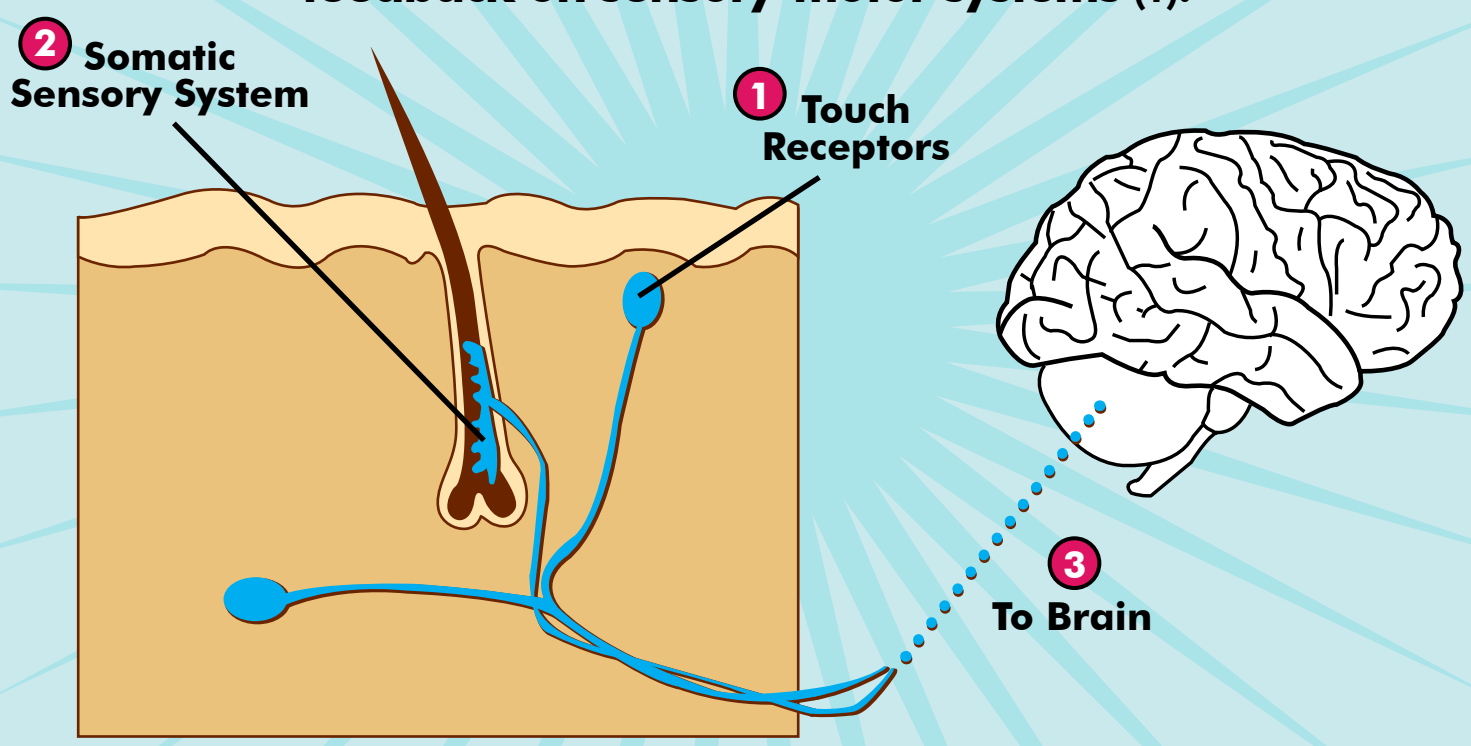
SENSORY PROTEINS

TOUCH

The body contains thousands of receptors and nerves which allow us to experience the sense of touch, also referred to as tactile perception. The somatosensory system allows organisms to perceive and decode a wide range of tactile stimuli to allow for the recognition of objects, ability to discern textures and provide feedback on sensory-motor systems (1).



PROCESS OF TOUCH

1. **Touch Receptors:** Send messages to your nerve receptors.
2. **Somatic Sensory System:** Contains nerve receptors that send messages to the brain.
3. **Brain:** Processes information to feel pressure, temperature and pain.

Your fingertips have 3,000+ touch receptors (2)

Human hands have 100,000 nerves (2)

The tongue, fingertips and lips are the most sensitive parts of the body to touch. (2)

Proteins associated with Tactile Perception:

TRPV1, TRPV2, TRPV3 & TRPV4
Transmembrane ion channel proteins that allows the influx of both calcium and sodium ions. TRPV1, TRPV2, TRPV3 & TRPV4 are heat sensing tactile receptors. TRPV1 is also activated by Capsaicin (4).

TRPA1
Involved in the perception of cold and the pain response to irritants such as tear gas, garlic and vehicle exhaust (4).

TRPM8
Involved in the detection of cool sensations below 25 degrees Celsius and methanol (4).

PIEZO 1 and PIEZO2
Researchers studied these proteins and their relation to sensing pressure stimuli (3).

NOVUS BIOLOGICALS