

NK Cells At-A-Glance



Measurement of NK Cell Activity

has been shown to be a useful tool for assessing immunosurveillance, which may reveal an underlying condition or disease where NK cell activity may be affected.

The NK Vue™ test, offered by NKMax Canada, is the first commercially available test to measure Natural Killer (NK) cell activity, and is used for *in vitro* diagnostic monitoring of the immune status of individuals.



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ABOUT NK CELLS

What is an NK Cell?

Natural Killer (NK) cells are a type of cytotoxic white blood cell that functions within the innate immune system. These cells play an important role in immune response since they are the first line of defense against dangerous infected or abnormal cells.

NK cells are the “first responders” constantly moving through the body looking for infected or abnormal cells to destroy. When an infected or abnormal cell appears, the NK cells immediately recognize it and begin their attack. NK cells are quick and effective at finding and destroying these cells.

NK Cell Function

NK cell function, also called NK cell activity, indicates how well an individual’s body can defend itself against dangerous infected or abnormal cells.

NK cell activity helps assess the strength of the immune system for fighting off infections or abnormal cells. NK cell activity has been shown to be affected in a number of conditions and diseases.

NK Cell Activity and Cancer

In the past few decades, many studies have demonstrated that NK cell activity is much lower in individuals with different types of cancers. Also, NK cell activity tends to be lower in healthy individuals whose parents, siblings or other family members have cancer.

This suggests that low NK cell activity is an important risk factor for the development of a variety of cancers. This theory has been confirmed in a study that followed more than 3000 people for a span of 11 years, and in which low NK cell activity was used to predict the risk of cancer. People with a genetic predisposition to low NK cell activity may be at higher risk for developing cancer.

NK Cells and Autoimmune Disease

Decreased NK cell activity has been observed in patients with active autoimmune disease. Fluctuation in NK cell activity levels has been shown to correspond to remission and relapse in several autoimmune diseases like Multiple Sclerosis, Systemic Lupus, and Rheumatoid Arthritis.

Low NK Cell Activity

If NK cell activity is shown to be very low, this does not indicate disease. Rather, it may be an indicator of a higher risk for cancer or that you have an unrecognized infection. Our NK Vue™ activity test provides a measurement of NK cell activity and depending upon the results, an individual may be retested or have additional tests.

Improve NK Cell Activity

Lifestyle changes such as weight loss, exercise, diet changes, and smoking cessation, can help to improve an individual’s immune system and the ability to fight cancer and other diseases.