

TXNIP ELISA Kit

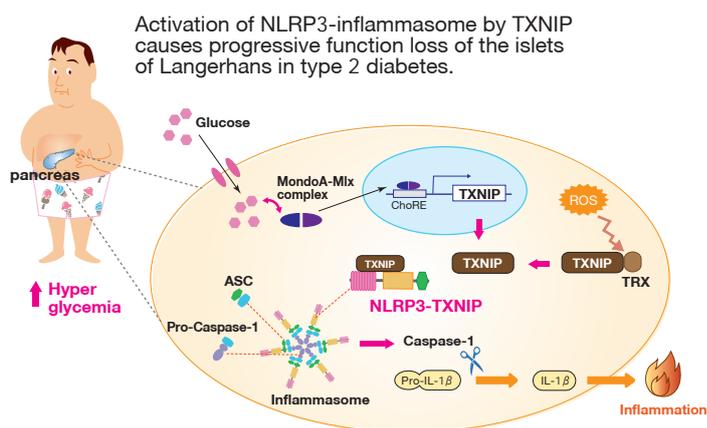
Type 2 diabetes: TXNIP increased in serum

Thioredoxin-interacting protein (TXNIP), also known as vitamin D3 up-regulated protein-1 and thioredoxin-binding protein-2, is an endogenous inhibitor of thioredoxin, and it inhibits the antioxidant function of thioredoxin by binding to a thiol group in its active site.

Additionally, it has been suggested that, through direct interaction of TXNIP with NLRP3 inflammasomes, TXNIP plays an important role in the activation of caspase 1 in the cells of high glucose-treated mice.

Because TXNIP-deficient mice show no differences in the activity of other inflammasomes (for example, NLRP4 and AIM2), TXNIP-dependent inflammasome activation is thought to be specific to NLRP3.

The expression of TXNIP is induced by various cellular stresses such as oxidative stress, UV exposure, heat shock, and apoptosis signaling. Its expression is commonly suppressed in a variety of human tumors.



Code	Product	Size
CY-8090	CircuLex Human TXNIP ELISA Kit	96 assays

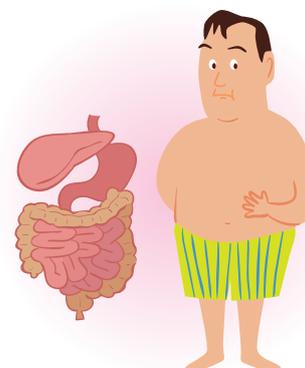
Lactoferrin ELISA Kit

Crohn's disease and colorectal diseases: Lactoferrin increased in feces

Type 2 diabetes: Lactoferrin reduced in serum

Lactoferrin is a glycoprotein in the transferrin family with iron-binding capability, and it is found in external secretions such as breast milk, tears, sweat, and saliva.

Focusing on its anti-inflammatory action, lactoferrin is a marker for inflammation in various bodily fluids, and it has been reported that fecal lactoferrin is a highly sensitive and specific marker for detection of the intestinal inflammation found in diseases such as Crohn's disease or chronic inflammatory bowel disorder (IBD). Additionally, it has been reported that a combination of markers such as lactoferrin-S100A8/A9 complexes, defensin, elastase, MPO, I-FABP are useful in the classification of IBD.



**Crohn's disease
Colorectal diseases**

Code	Product	Size
CY-8089	CircuLex Human Lactoferrin ELISA Kit	96 assays
CY-8098	CircuLex Bovine Lactoferrin ELISA Kit	96 assays

Chitinase ELISA kit

Chitotriosidase Atherosclerosis: increased in serum

YKL-39 Osteoarthritis: increased in synovial fluid

YKL-40 Ischemic cardiovascular disease, cancer, diabetes: increased in serum

Chitin is a β 1--> 4-bonded biopolymer of N-acyl-D-glucosamine, and is the main component of exoskeletons and cell walls of various organisms including arthropods, nematodes, and fungi. However, it has not been found in vertebrates.

Chitinase, an enzyme that degrades chitin into oligomers, has been found to exist in a wide range of organisms including vertebrates, and two varieties of chitinase have been identified in mammals.

One of these is chitotriosidase, which is produced by macrophages, and the other is acidic mammalian chitinase (AMCase), which is primarily secreted in the stomach.

Most chitinase-family proteins are found or identified in relation to arthritis, allergies, or parasitic infections accompanied by eosinophilia, and because they have been found to be strongly related to various pathologies, they are gaining attention as excellent biomarkers for understanding pathology.

Chitotriosidase

Biomarkers for macrophage activity

In the serum of Gaucher disease patients and atherosclerosis patients, chitotriosidase levels are increased

Acidic Mammalian Chitinase

An important protein that participates in Th2-dependent inflammation

Participates in asthma and allergic diseases by influencing downstream pathways of IL-13



YKL-39

Biomarker for chondrocyte activation and disease progression in osteoarthritis

Noted as a biomarker for diseases such as tumors, atherosclerosis, and Alzheimer's disease

YKL-40

Important in angiogenesis, inflammation, cell remodeling, etc.

YKL-40 levels are increased in the blood serum of patients with inflammatory diseases such as ischemic vascular diseases, cancer, diabetes, and asthma, and diseases featuring continuous tissue reconstruction

Code	Product	Product type	Size
CY-8087	CircuLex Human YKL-39 ELISA Kit	Kit	96 assays
CY-8088	CircuLex Human YKL-40 ELISA Kit	Kit	96 assays
CY-1249	CycLex [®] Chitotriosidase Fluorometric Assay Kit	Kit	100 assays
CY-8074	CircuLex Human Chitotriosidase ELISA Kit	Kit	96 assays
CY-E1249	Chitotriosidase (Human, Active)	Enzyme	10 μ g (0.5 μ g/ μ L)
CY-1248	CycLex [®] Acidic Mammalian Chitinase Fluorometric Assay Kit	Kit	100 assays
CY-E1248	Acidic Mammalian Chitinase (Human, Active)	Enzyme	10 μ g (0.2 μ g/ μ L)

UCHL1 ELISA Kit

Brain contusion & ischemic stroke: UCHL1 increased in serum

Ubiquitin carboxy-terminal hydrolase L1 (UCHL1), also known as PARK5 and neuron cytoplasmic protein gene product 9.5 (PGP9.5), is a hydrolase of the C-terminus of ubiquitin, and is a factor that acts to regulate ubiquitin-dependent signaling pathways. Since UCHL1 is abundant in the central nervous system, it has recently garnered much attention as a candidate biomarker for brain damage and ischemic stroke. UCHL1 has been confirmed to be released from damaged neurons, to enter the cerebrospinal fluid, and finally to flow into circulating blood.

Code	Product	Size
CY-8092	CircuLex Human UCHL1 ELISA Kit	96 assays
CY-8093	CircuLex Mouse UCHL1 ELISA Kit	96 assays