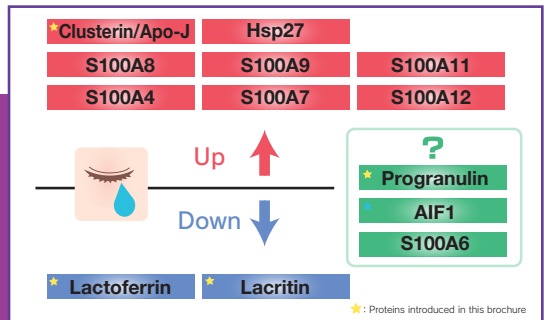


# ELISA Kits that can be used with human tear samples !!

- Assay kits for measuring candidate disease markers
- Can be used with tear samples
- Can be used with also serum and plasma samples\*

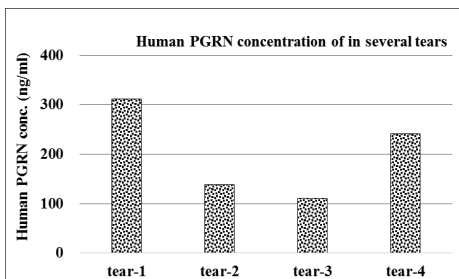
\*Please refer to each data sheet for further information.



## Up/down-regulated tear proteins in dry eye and associated inflammation.

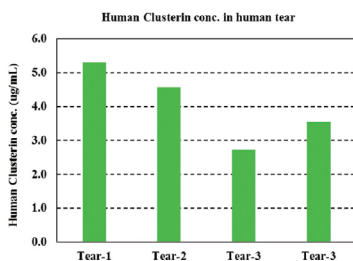
### Progranulin (PGRN) New !

Progranulin (PGRN) is a secretory protein in highly glycosylated form. PGRN is a growth factor related to cell proliferation and tumorigenesis. It has been shown that PGRN restrain rheumatoid arthritis by binding to tumor necrosis factor receptors (TNFR). In addition, it has been reported that circulating PGRN levels are elevated in patients with type 2 diabetes. However, the detailed physiological function of PGRN remains unknown.



### Clusterin

Clusterin, also known as apolipoprotein J, is a secreted heterodimeric glycoprotein expressed in diverse epithelial cells. The expression of clusterin is induced in Alzheimer's disease and atherosclerosis. It has been reported that the expression level of clusterin is up-regulated in various cancer cells but down-regulated in several cancers, including esophageal squamous cell carcinoma, testicular germ cell tumors, and prostate cancer.



### Lactoferrin

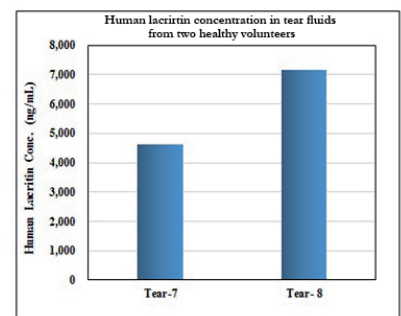
Lactoferrin, a member of the transferrin family, is an iron-binding glycoprotein. It is found in most exocrine secretions, including mammalian breast milk, tears, sweat, and saliva. Tears contain a high concentration (approximately 1 mg/mL) of lactoferrin. Lactoferrin is a major component of mammal's innate immunity system, and it has been reported to have many functions, such as anti-viral, anti-microbial and anti-inflammatory activity.

In tear of healthy volunteers

sample	hLF conc. (mg/ml)
1	5.3
2	1.8
3	5.3
4	4.7
5	1.3

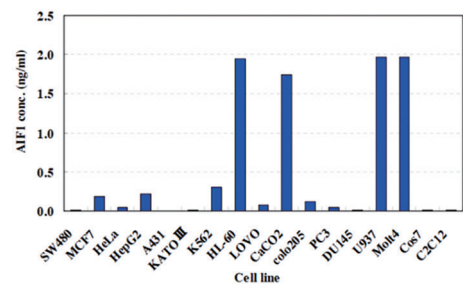
### Lacritin New !

Lacritin is a tear glycoprotein that is apically released from human lacrimal acinar cells. Since a decrease of tear lacritin was reported in patients with blepharitis and in contact lens-related dry eye, lacritin might play an important role in maintaining tear fluid and the ocular surface.



### AIF-1

Allograft inflammatory factor-1 (AIF1) is an IFN-γ-induced protein related to the process of developing chronic inflammation. In humans, it is observed that the number of AIF1-positive macrophages/microglia is increased in focal cerebral infarctions, traumatic brain damage, gliomas, and uveitis.



	Code	Product	Size
New!	CY-8101	CircuLex Human Progranulin ELISA Kit	96 assays
New!	CY-8105	CircuLex Human Lacritin ELISA Kit	96 assays
	CY-8099	CircuLex Human Clusterin/Apo-J ELISA Kit	96 assays
	CY-8089	CircuLex Human Lactoferrin ELISA Kit	96 assays
	CY-8084	CircuLex Human AIF1 ELISA Kit	96 assays