



FIANOSTICS
Light Up Your Results

Super Sensitive and Easy

FluoBolt™ -Asporin

High Sensitivity, Single Step Immunoassay for Asporin in human Serum for Disorders Related to TGF- β 1 Signaling

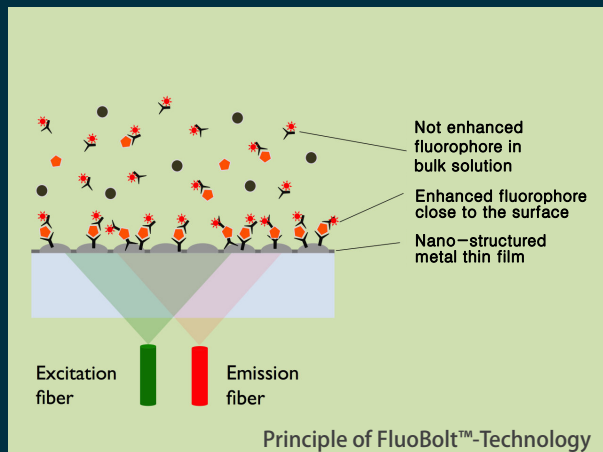
Signal Enhanced Fluorescence Immunoassay
on Plasmonic Substrates



- High Sensitivity
- Single Step Assay
- No Wash
- No Enzyme Substrate
- Stable Signal over Time

www.fianostics.at

About FluoBolt™-Technology:



For more information about FluoBolt™-Technology, please visit: www.fianostics.at/en/technology

FluoBolt™-Technology is based on a physical effect called “Metal Enhanced Fluorescence” which is generated by nanometal structures on the bottom of our micro plates. Those structures create a very strong local electro-magnetic field (“localized surface plasmon”), that greatly enhances the fluorescence of surface bound fluorophores.

The unique features of FluoBolt™-Technology enable us to develop direct fluorescence immunoassays with the following benefits:

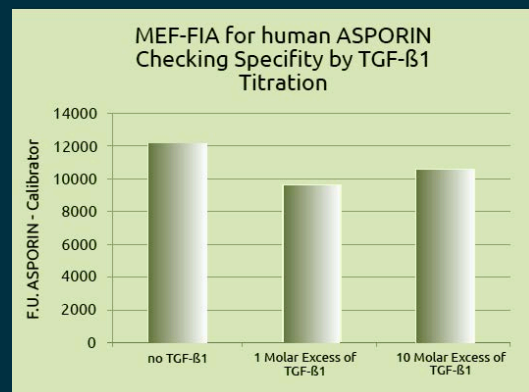
- High Sensitivity
- Single Step Procedure
- No Washing Steps
- No Enzym Subtrates required
- Long Term Stable Signals

About FluoBolt™-ASPORIN (Cat. Nr. 1702):

Asporin is an antagonist of TGF-β1 and negatively regulates chondrogenesis by blocking the TGF-β1/receptor interaction. This protein plays an important role in the patho-physiology of:

- Osteoarthritis
- Lumbar Disc Disorder
- Tumor Progression

FluoBolt™-ASPORIN detects free bioactive human ASPORIN as well as ASPORIN bound to TGF-β1, wich was shown by titration of assay calibrator with recombinant TGF-β1 (see chart on the right). Even a 10 fold molar excess of TGF-β1 did only slightly decrease the calibrator signal, indicating that also the ASPORIN/TGF-β1 complex was detected.



Literature:

- Cartilage Intermediate Layer Protein and Asporin Polymorphisms Are Independent Risk Factors of Lumbar Disc Degeneration in Male Collegiate Athletes Seok-KiMin et al., Cartilage. 2014 Jan; 5(1): 37-42.
- Asporin, a Susceptibility Gene in Osteoarthritis, is expressed at Higher Levels in the More Degenerate Human Intervertebral Disc Gruber et al., Arthritis Res Ther. 2009; 11(2): R47.
- Asporin is a Fibroblast-Derived TGF-β1 Inhibitor and a Tumor Suppressor Associated with Good Prognosis in Breast Cancer. Maris et al., PLoS Med. 2015 Sep 1;12(9)

Assay Characteristics

Method	Metal Enhanced Direct Sandwich Fluorescence Immunoassay in 96-well plate format
Sample type	Serum
Standard range	0 to 200 pmol/l (6 standards and 2 controls in a serum based matrix)
Conversion factor	1 pg/ml = 0.018 pmol/l (MW: 55,7 kD / Monomer)
Sample volume	10 µl (undiluted sample) / well
Incubation steps/time/temperature	Single step assay, over night at RT
Sensitivity	LOD (0 pmol/l + 3 SD): 10 pmol/l; LLOQ: 25 pmol/l
Cross-reactivity	Human ASPORIN shares around 99% aa sequence identity with higher apes (e.g. gorilla or chimpanzee) but only 90% with rat/mouse and 87% with bovine/equine ASPORIN. Cross reactivity of this assay with other species than human has not been tested.