

## Microbead Assay for Quantifying Proteins (#7641)

### *Versatile microbead assay kit for quantifying protein expression*

Georgia Tech inventors have developed a microbead assay for quantifying protein expression that is high-throughput and operationally simplistic. The assay incorporates total protein signal normalization with every sample which allows for analysis of a variety of protein and sample types. Protein-coated particles are handled through exposure to a magnetic field for any protein of interest, regardless of size and type. Normalization is achieved by calculating ratios between the antibody signal and total protein. Using a wide range of chemical compounds, one sample can be probed for several antibody targets along with protein, allowing complex, high throughput analysis.

### Benefits/Advantages

- **Versatile** – Analyze a variety of proteins in a single sample
- **Easy-to-use** – Overcomes problems with current assay methods and compatible with proper sample normalization
- **Consistent** – Highly sensitive detection even with large sample sizes

### Potential Commercial Applications

- Tissue protein expression analysis
- Structural biology
- Disease studies

### Background/Context for This Invention

Proteins act as a gene regulator, which can lead to diseases such as Alzheimer's and Parkinson's simply from a defect in structure. Through the study of protein expression, scientists track how minute changes at the molecular level have an impact on the human body. Current methods for quantifying protein expression are technically challenging or do not account for sample error through protein expression normalization.

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**For more information about this technology, please visit:**

<https://industry.gatech.edu/technology/microbead-assay-quantifying-proteins>