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KArray: A public archive for microarray-based functional genomics data

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Microarray technology has played a crucial role in functional genomics research, generating a vast amount of data over the past few decades. However, many valuable microarray datasets remain underutilized due to the lack of a centralized repository. To address this issue, we have developed KArray (https://kbds.re.kr/karray), a public data repository that collects, curates, and provides access to microarray data generated in Korea. A web-based platform has been established to allow users to submit, search, browse, and download datasets, including raw data files, processed data files, and descriptive metadata, through an intuitive interface. Each dataset is curated and annotated using standardized metadata based on the Minimum Information About a Microarray Experiment (MIAME) guidelines to ensure data integrity and reproducibility. KArray also employs a high-speed data transmission system, GBox, to support fast and stable data transfer. As of August 2025, KArray stores over 10,000 microarray data files, covering a wide range of experimental conditions and sample types. Additionally, KArray provides category-filtering functions that enable efficient data retrieval. By standardizing metadata and enhancing data accessibility, KArray contributes to advancing data-driven research in functional genomics.