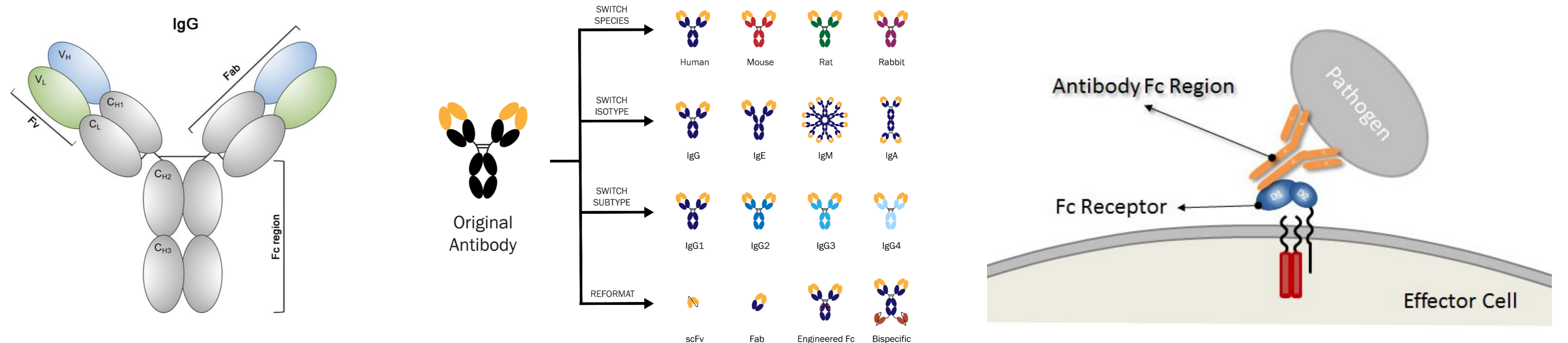


### 연구실 소개

**비전** **도전** **성장**

한남대학교 생명시스템과학과 항체공학 연구실은 “항체라이브러리 활용한 신규항체 선별”, “항체치료제 개발연구”, “항체의약품 품질관리 시험법 개발” 등의 바이오의약품 분야 연구를 “비전”, “도전”, “성장”의 가치관을 바탕으로 열심히 수행하고 있습니다.

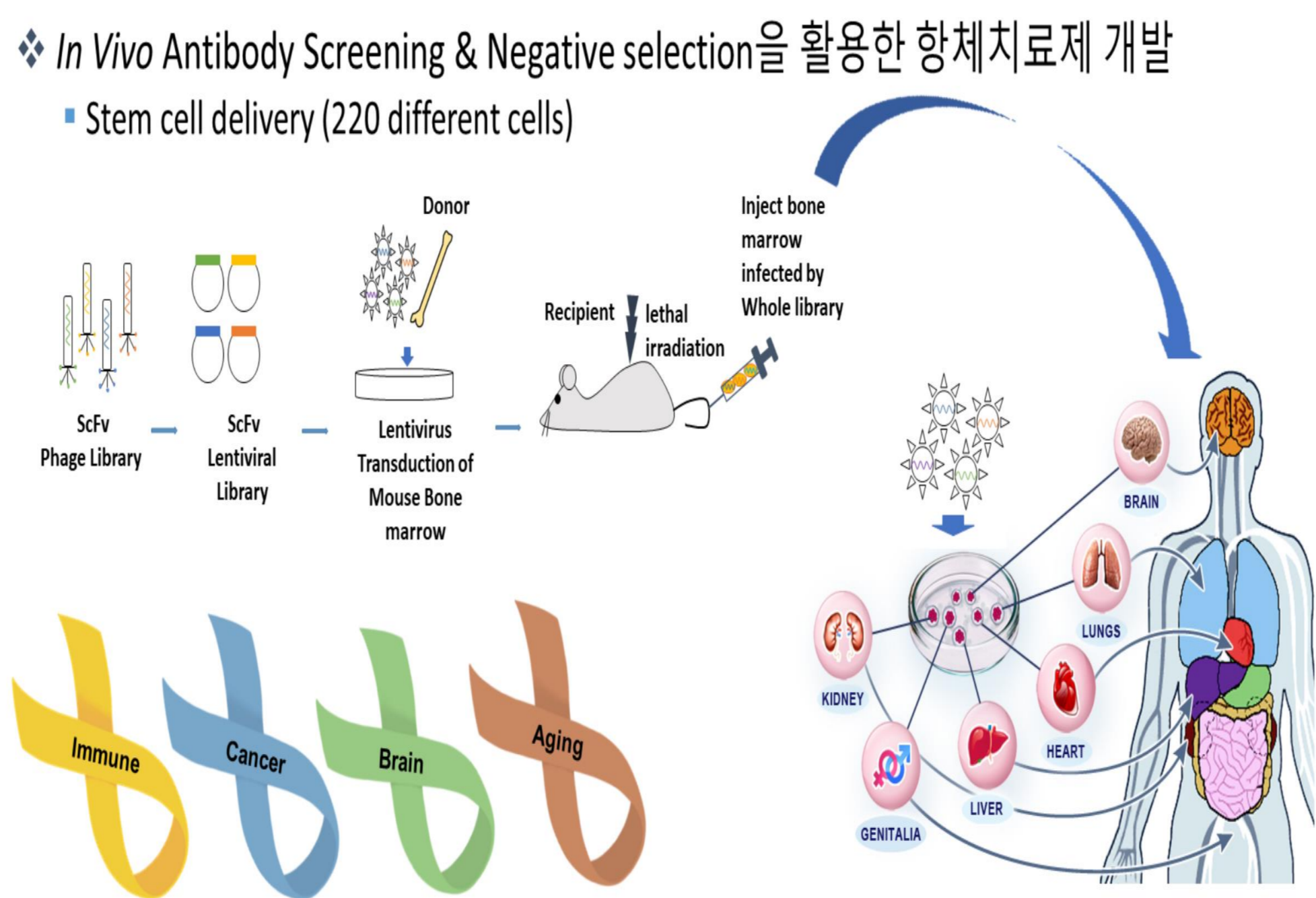
### 항체 구조



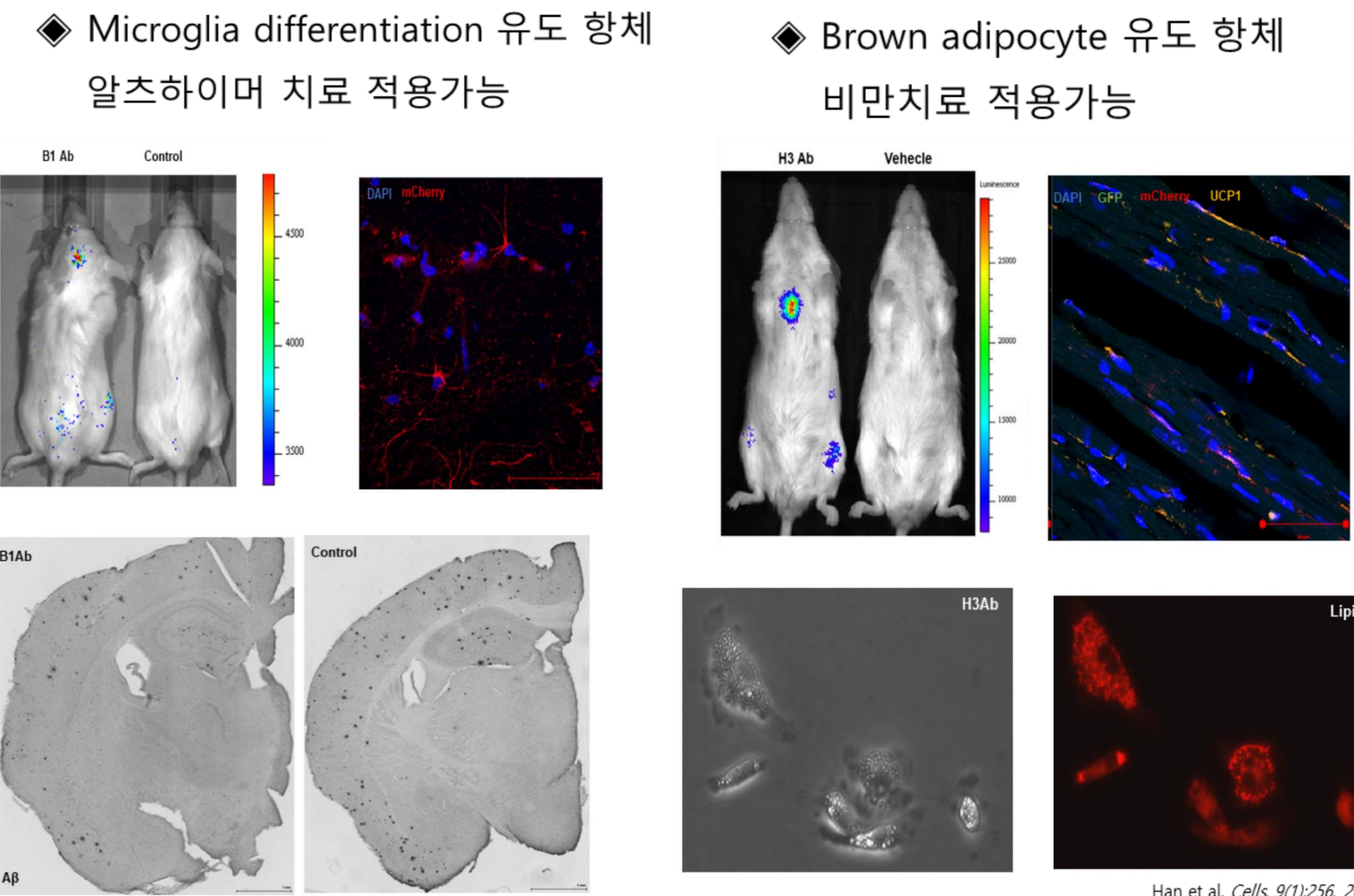
### 연구성과(2021~)

- Trends in the Development of Antibody-Drug Conjugates for Cancer Therapy. *Antibodies*, 2023.
- Improved Separation in Horizontal Protein SDS-PAGE with Double-Deck Flat Electrodes and a Field Inversion Gel Electrophoresis Module. *Methods and Protocols*, 2023.
- Advancements in Bispecific Antibody Development and Research Trends. *Microbiology and Biotechnology Letters*, 2023.
- Antibody Libraries as Platforms to Exploring Target and Receptor Pleiotropy. *Israel Journal of Chemistry*, 2023.
- Agonist (P1) Antibody Converts Stem Cells into Migrating Beta-Like Cells in Pancreatic Islets. *Journal of Microbiology and Biotechnology*, 2022.
- Anti-inflammatory clearance of amyloid- $\beta$  by a chimeric Gas6 fusion protein. *Nature Medicine*, 2022.
- Antibodies Regulate Dual-Function Enzyme IYD to Induce Functional Synergy between Metabolism and Thermogenesis. *International Journal of Molecular Sciences*, 2022.
- Sestrin2 protects against cholestatic liver injury by inhibiting endoplasmic reticulum stress and NLRP3 inflammasome-mediated pyroptosis. *Experimental & Molecular Medicine*, 2022.
- Spreader-CDR system for efficient, reproducible, and frugal western blot. *Electrophoresis*, 2021.

### 연구관심 분야



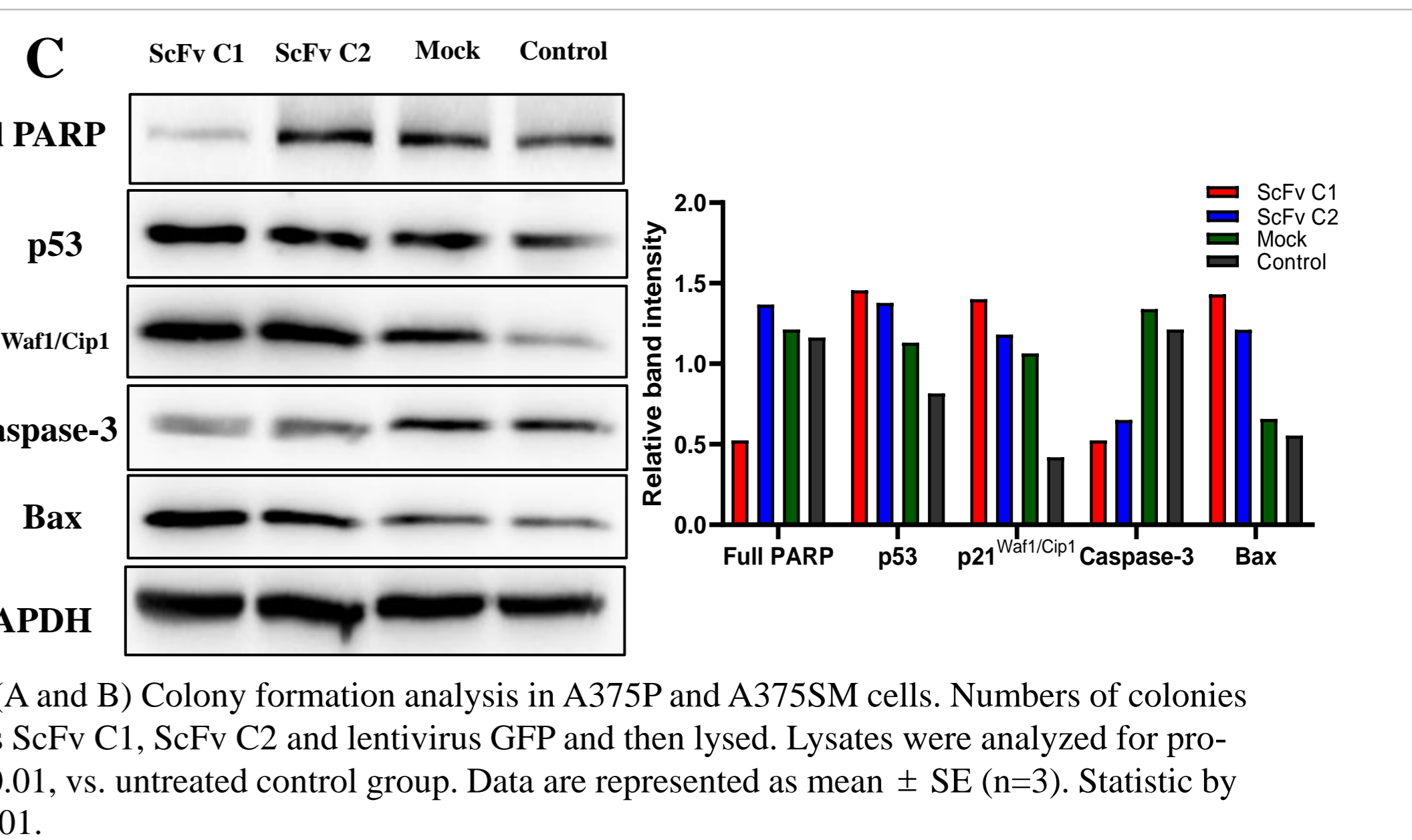
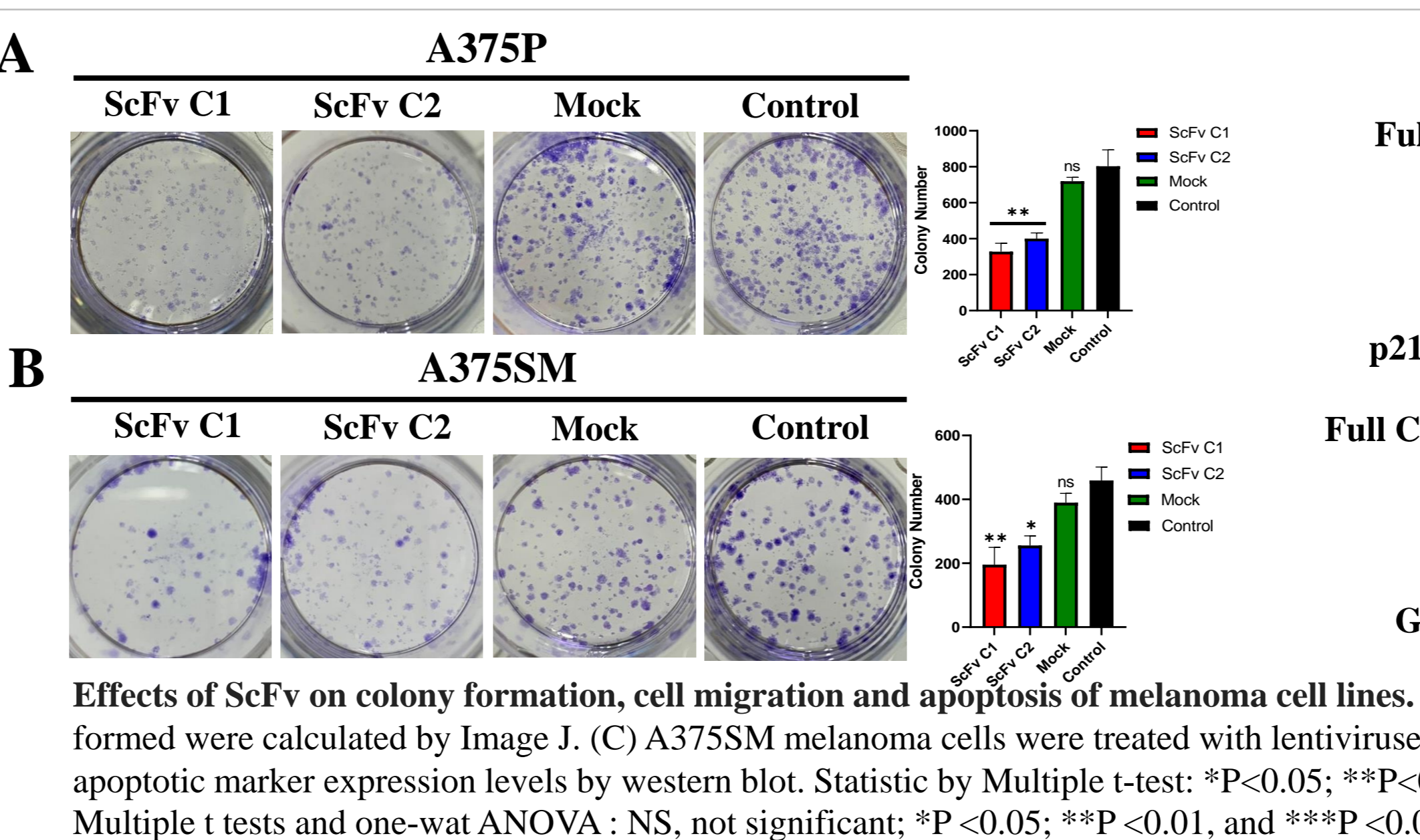
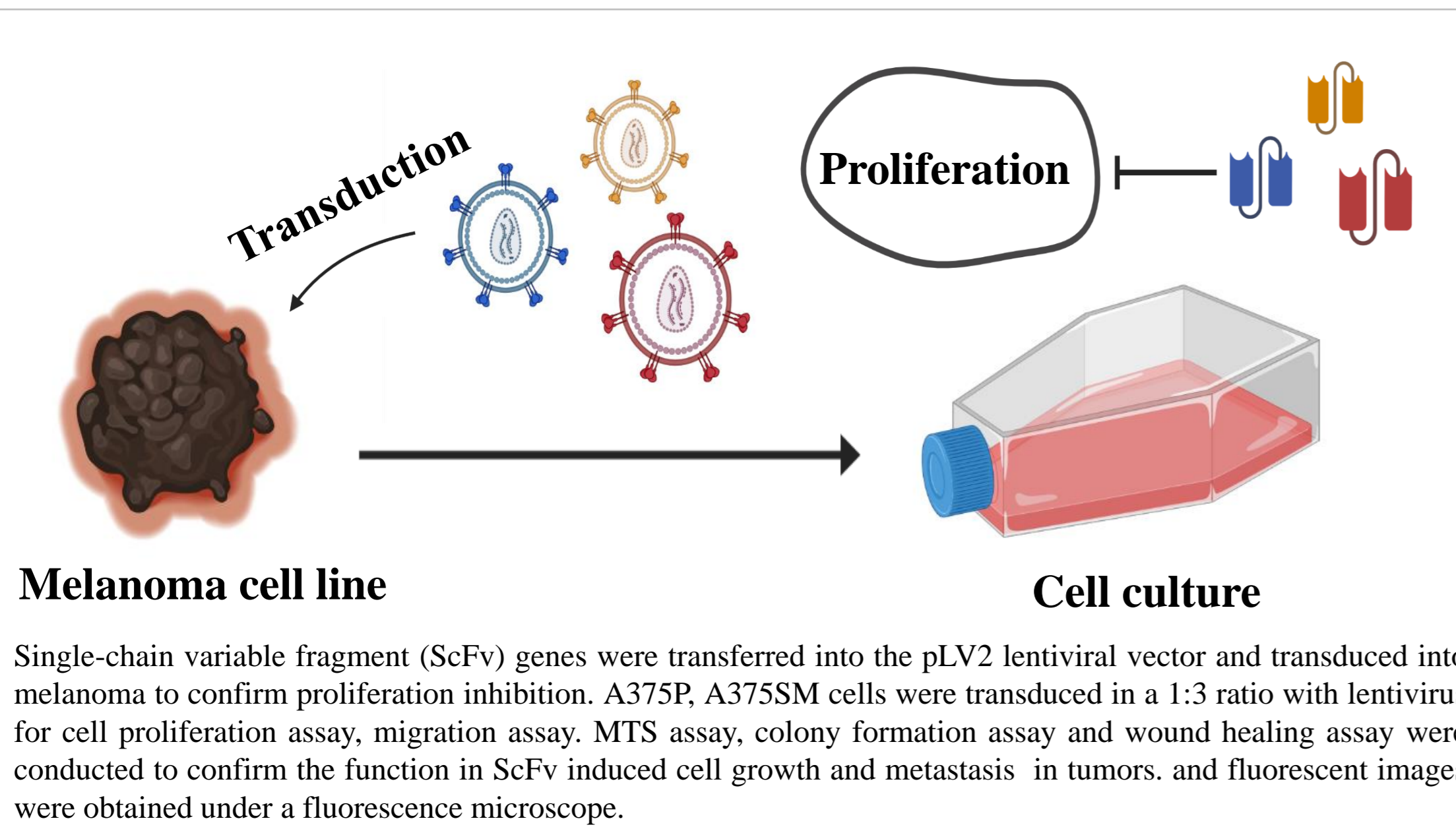
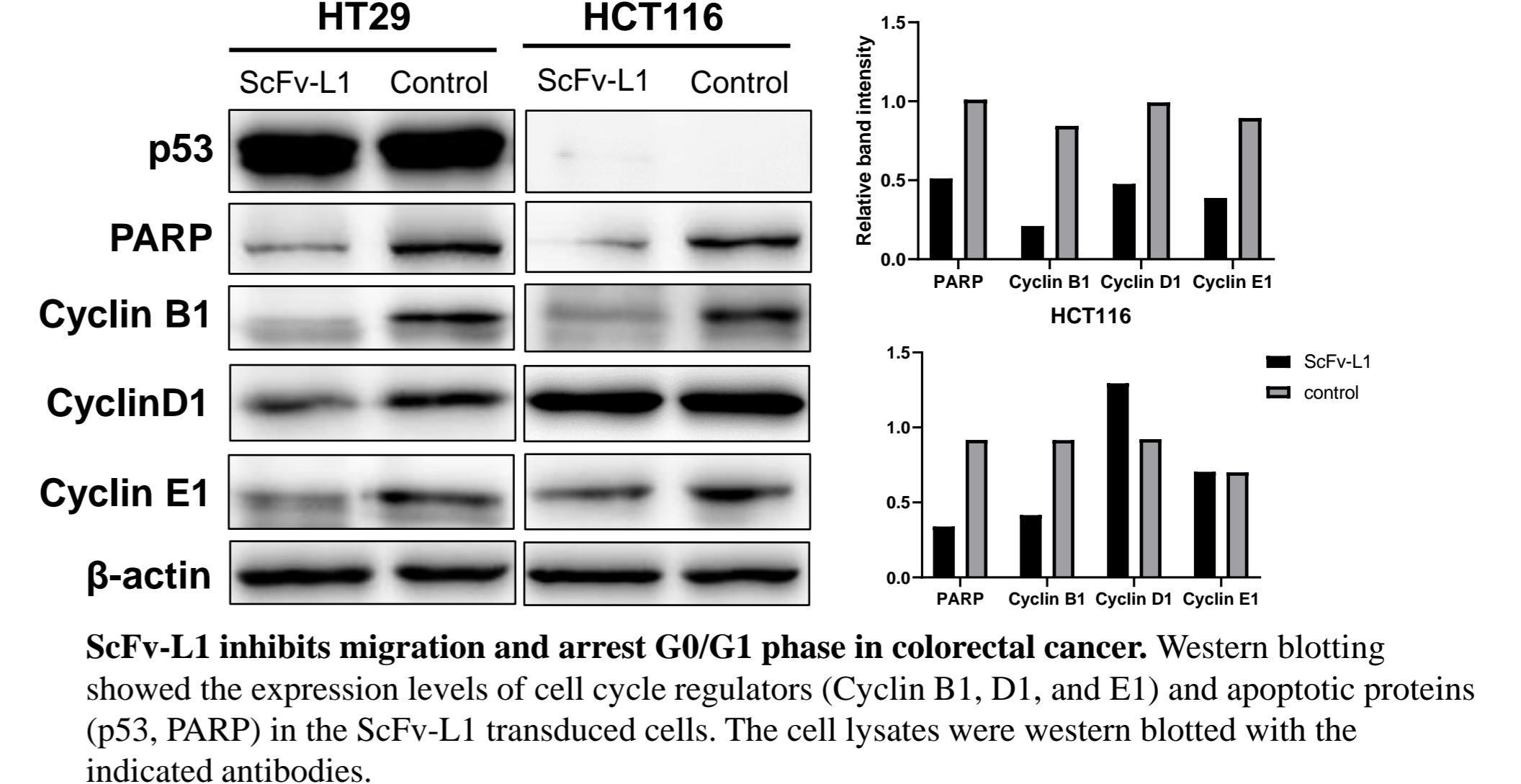
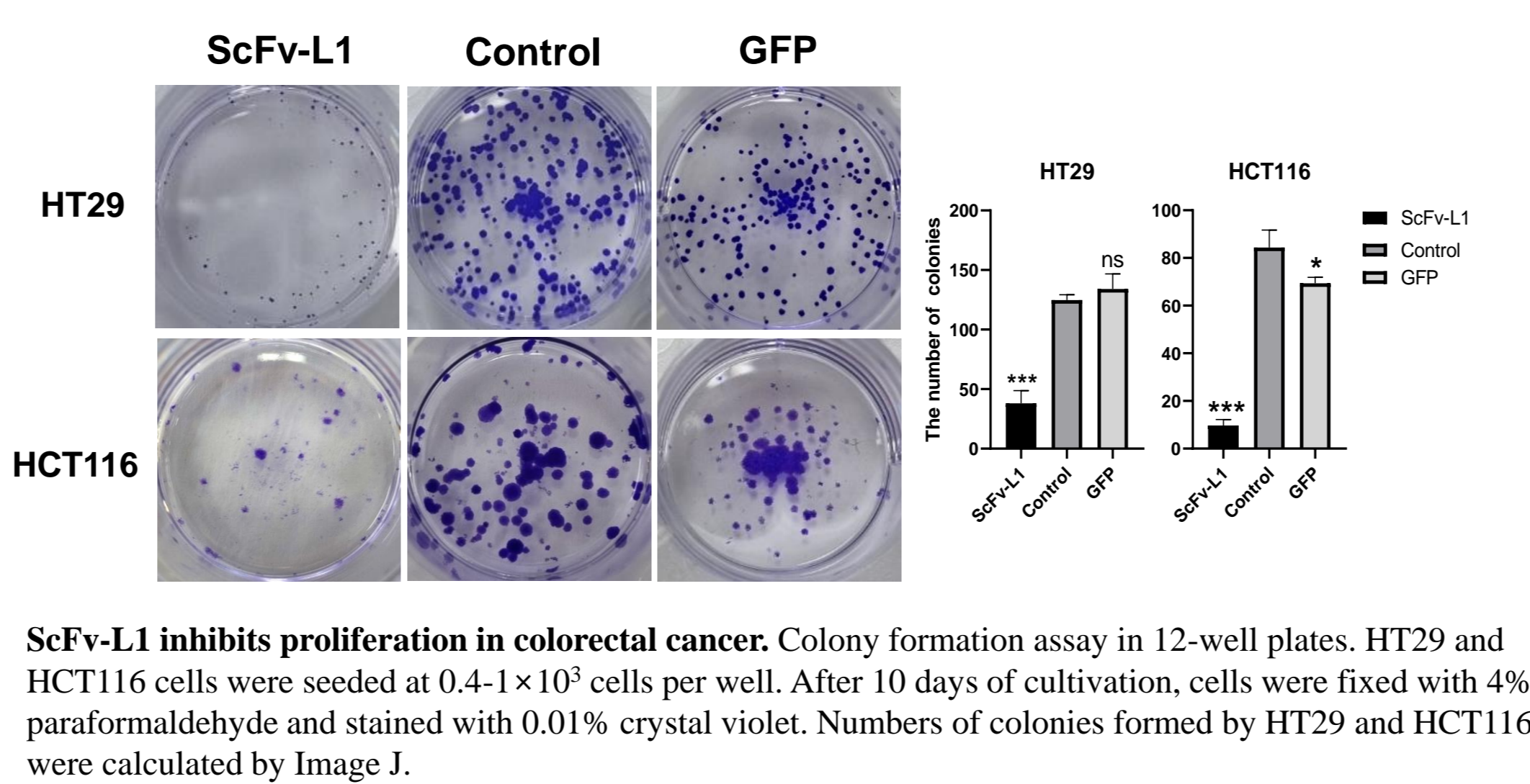
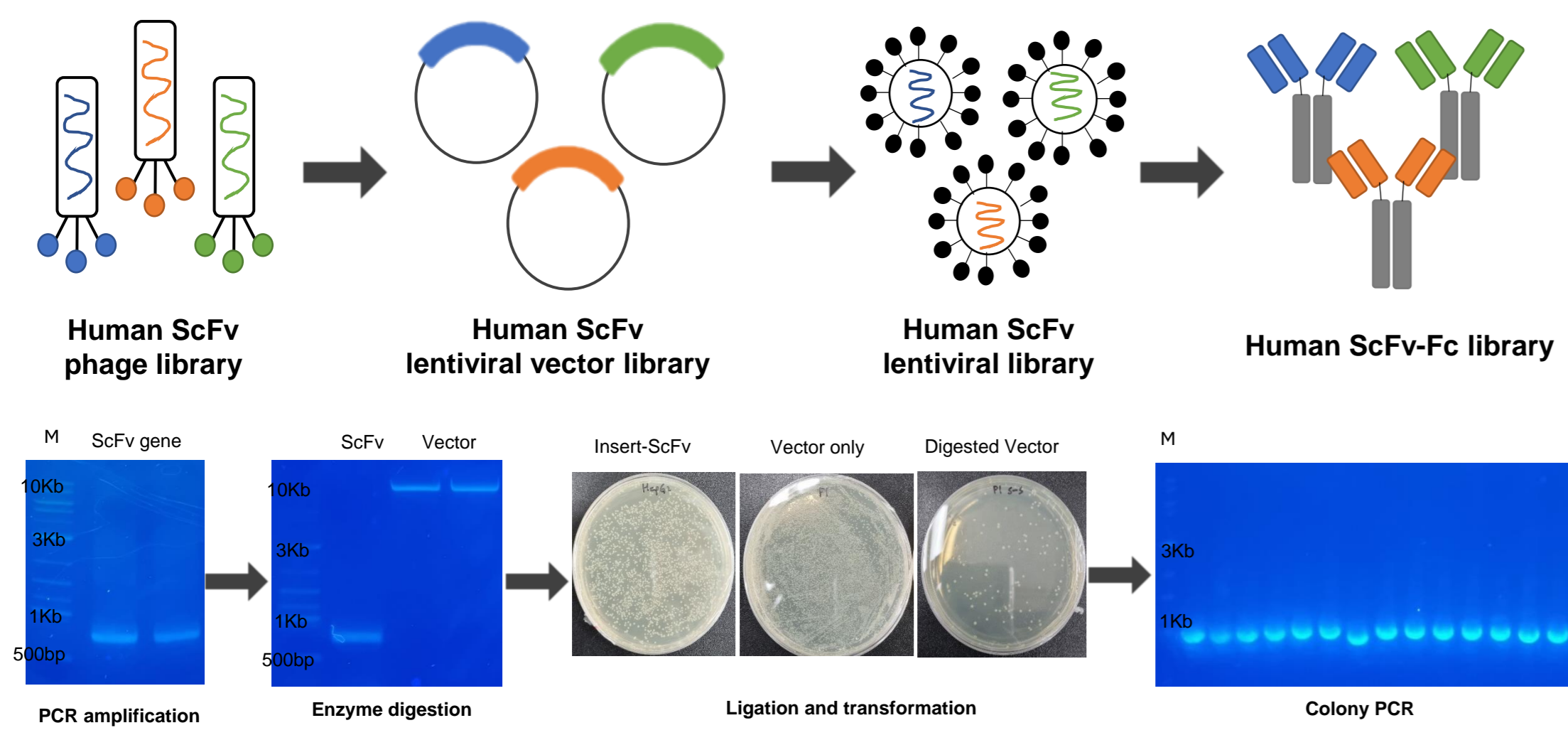
### 줄기세포 분화유도 항체 선별 및 기능연구



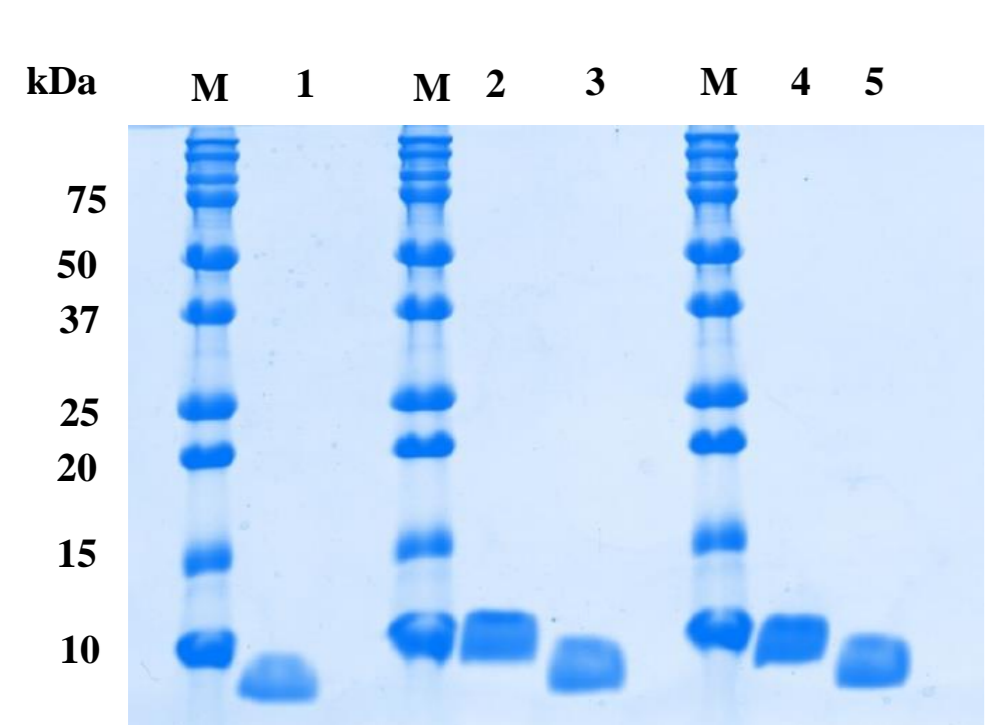
### 연구실

연구책임자: 한경호 교수      연구실 : 진리관 720102호  
교수연구실: 042-629-8770      실험실 : 042-629-8777

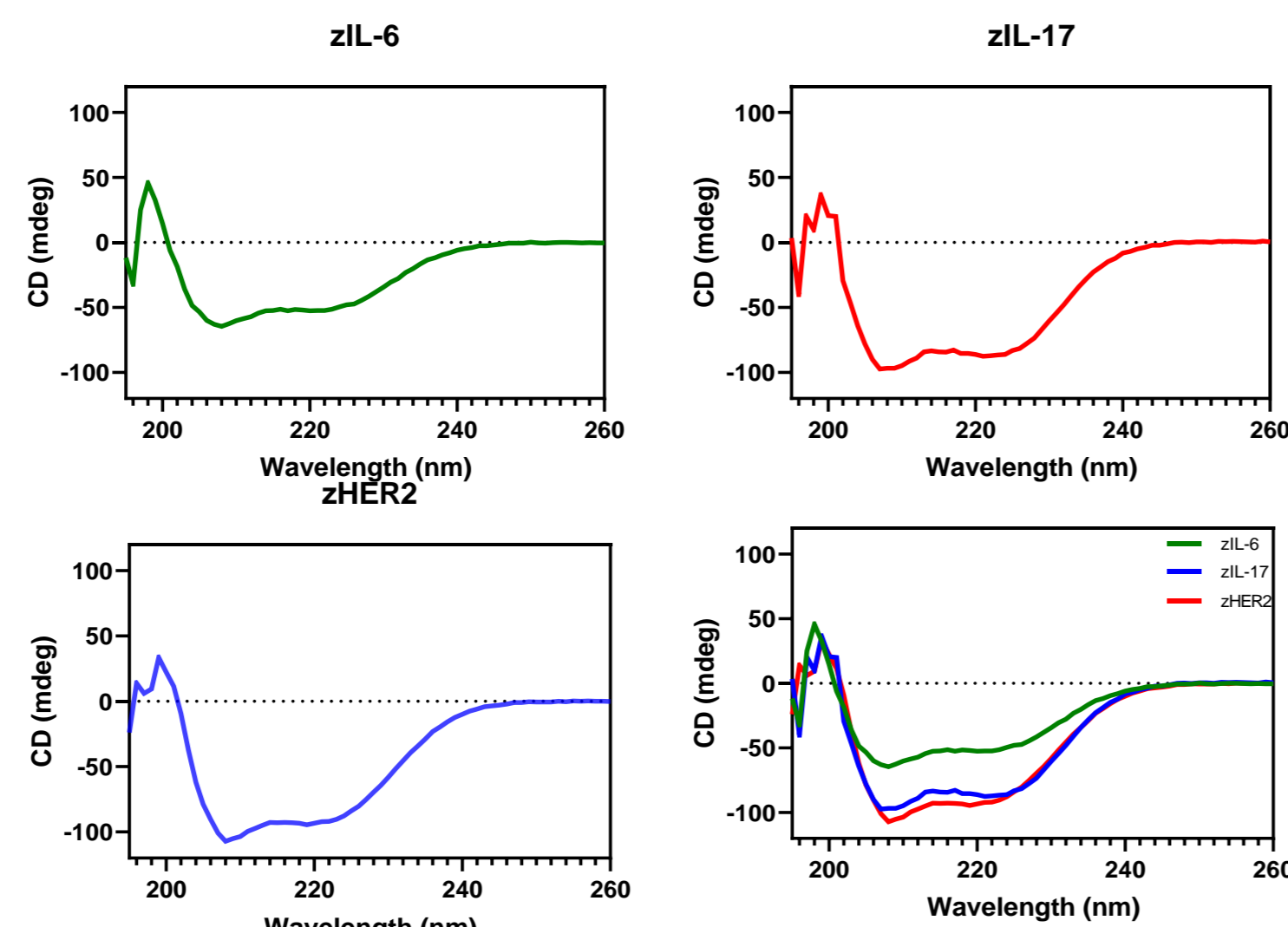
### 암 치료용 항체 선별 및 기능연구



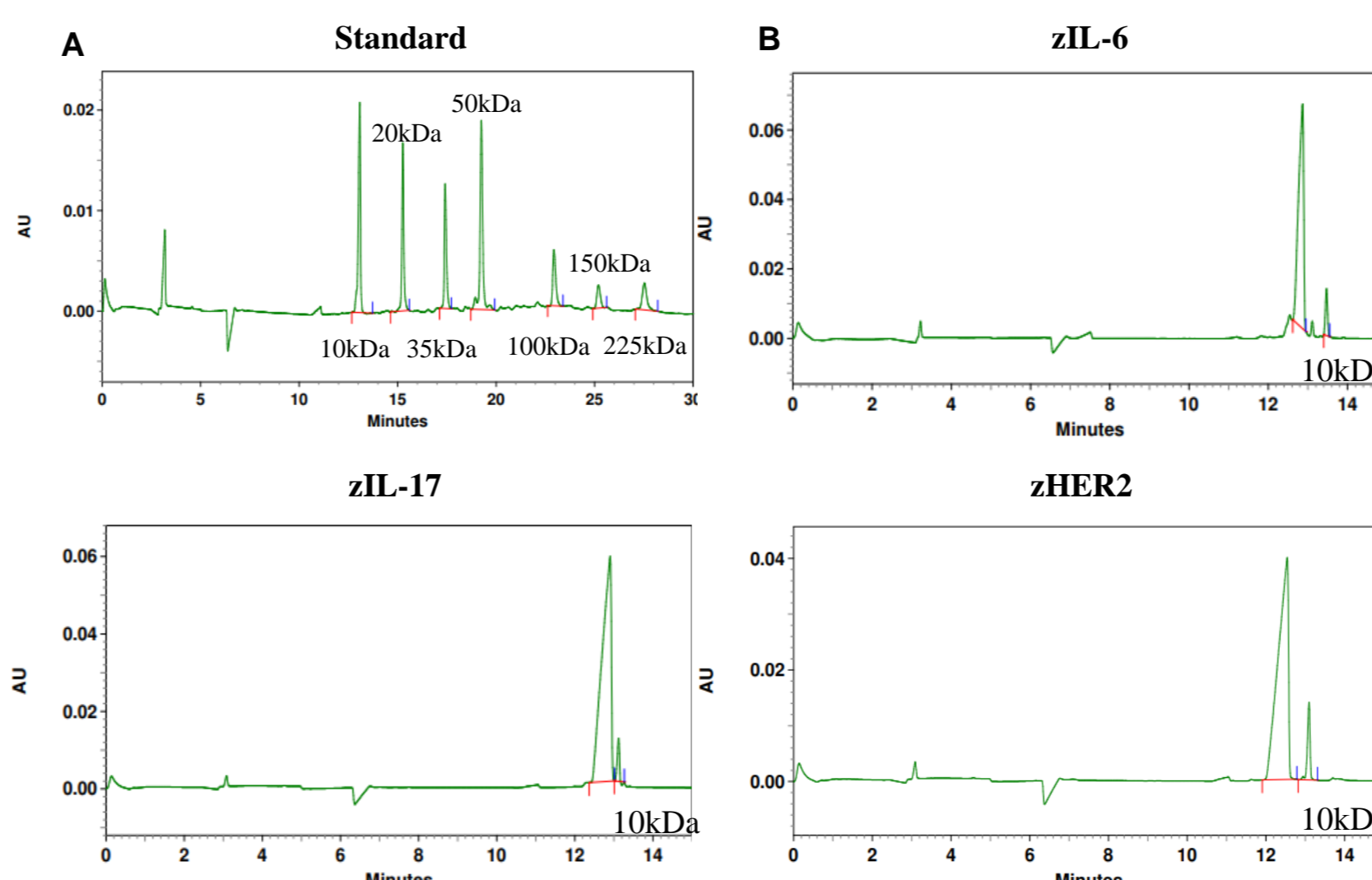
### 바이오의약품 품질관리 시험법 개발



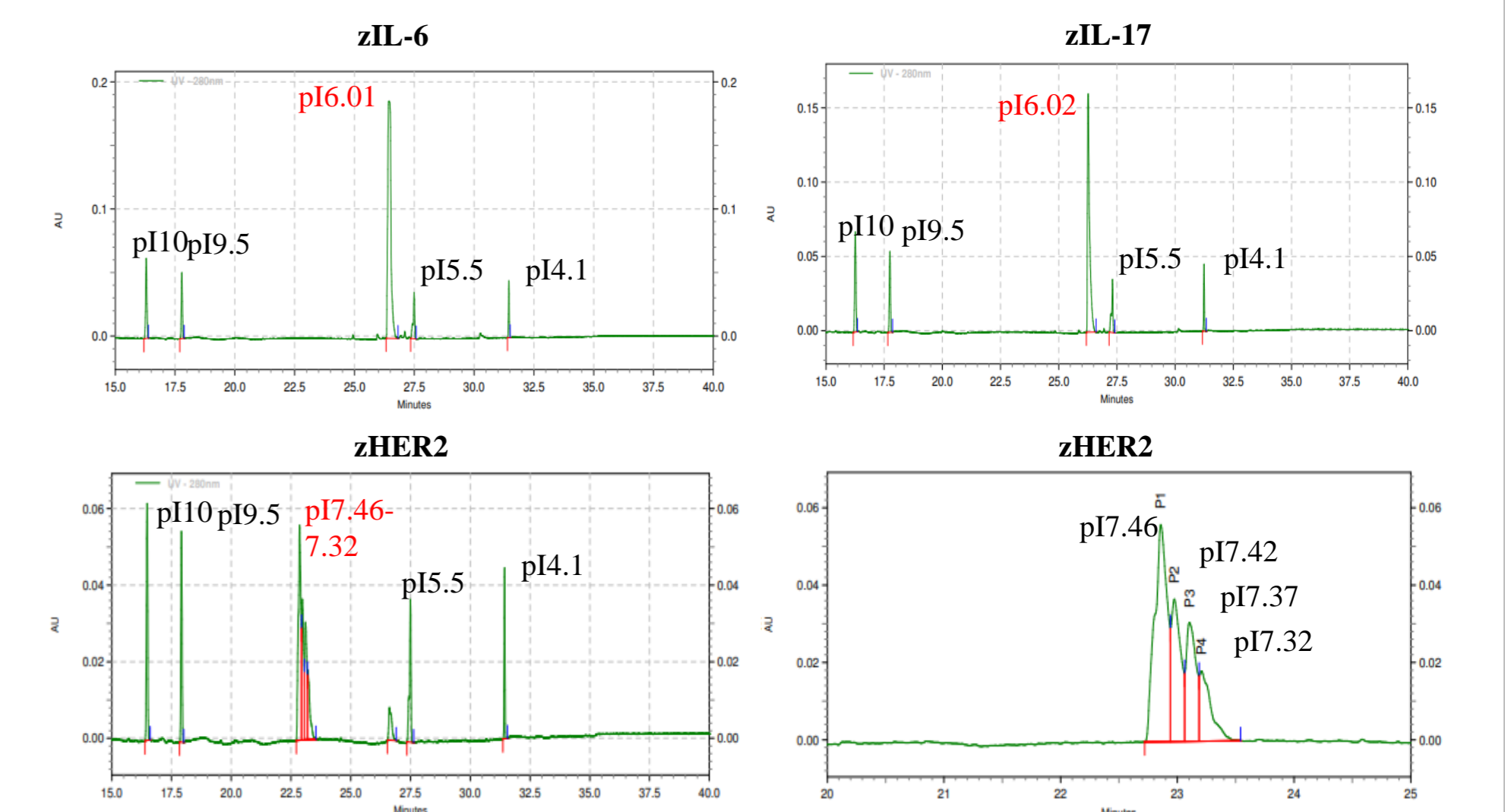
No.	Name
M	Protein marker
1	Synthesized zHER2 2 $\mu$ g
2	C-term zIL-17 2 $\mu$ g
3	C-term zIL-6 2 $\mu$ g
4	N-term zIL-17 2 $\mu$ g
5	4N-term zIL-6 2 $\mu$ g



Drug 2차구조 분석, Circular dichroism (CD) spectrometer assay Affibody is alpha helix structure, alpha helix proteins have negative bands at 222nm and 208nm and a positive band at 193nm, b-sheet have negative bands at 218nm and positive bands at 195nm. Protein lacking any ordered secondary structure will not have any peaks above 210nm



Drug 분자량 분석, Capillary Electrophoresis-SDS (CE-SDS). (A) The peaks of the SDS-MW size standard were measured in separation. Each peak was clearly identified, providing confidence in the analysis results. (B) The zIL-17, zIL-6, and zHER2 affibodies were all observed as a single peak, and zIL-17 peaked behind zIL-6 and zHER2. The peak was observed around 13 minutes for the 10kDa internal standard, and the sample peaked in front of the 10kDa internal standard.



Drug 전하변이체 분석, Capillary Isoelectric Focusing (cIEF) The zIL-17, zIL-6, and zHER2 affibodies met the system suitability criteria with 99.99% reliability for the cIEF peptide markers p14.1, 5.5, 9.5, and 10.0. zIL-6 and zIL-17 were observed as a single peak around p16, and zHER2 was observed as a peak separation around p17.4.