



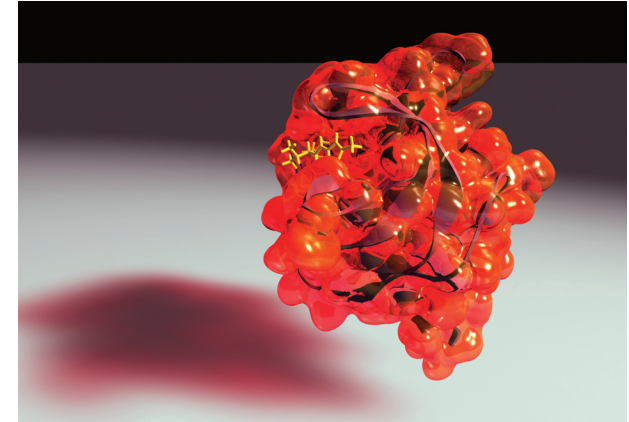
Current handling and production of pluripotent cells and stem-cell derived lineages suffers from labor intensive manual culturing steps, frequent feeding of cultures, undefined matrices, inadequate purification, and other problems. These problems greatly increase time, costs, variability of results, scale-up difficulties and other barriers to industrial viability. Primorigen is solving these problems by providing innovative solutions for stem cell maintenance, proliferation, characterization and assay development, including StemAdhere™, a recombinant human protein that offers a defined substrate for pluripotent cell proliferation, and its completely xenobiotic-free version StemAdhere™ XF. Products in development include new defined matrices for stem cell differentiation, and a user-friendly, cost-effective system for large scale stem cell production. Primorigen also is developing human stem cell-derived disease models for high throughput, low cost compound and toxicity screening, addressing a strong need in pharmaceutical drug discovery.



Partner with Primorigen...

Primorigen Biosciences has a successful record of establishing dynamic, mutually beneficial partnerships focused on common goals. We are interested in technologies related to stem cell research and clinical applications, including cell maintenance and growth, reproducible large scale production, cell characterization, and stem-cell derived drug discovery. Opportunities include funding, co-development, licensing and distribution, and other relationships. Contact us today to discuss your partnership interests.

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Antibodies & Recombinant Proteins

Stem Cells & Pluripotency
Germ Layer Differentiation
Endoderm & Pancreatic



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Antibodies & Recombinant Proteins For Stem Cell Research

Primorigen Advantages

Primorigen's monoclonal antibody (mAb) and recombinant protein production scientists have 35 years of antibody production and validation experience. Advantages of our mAbs and proteins include:

- Early-stage antibody candidate selection based on native protein recognition.
- Validated for multiple applications.
- Multiplexed screening and clone selection process for maximum efficiency.
- Complete expression capabilities including mammalian, insect, and bacterial systems.

Native Protein Recognition

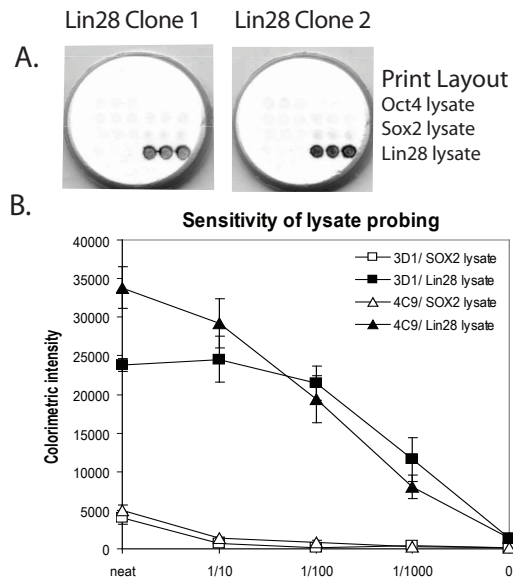


Figure 3. Early Native Protein Recognition Screening. (A) Using Spots On Dots™, monoclonal antibodies raised against two Lin28 peptides were identified that specifically bind lysates from cells over-expressing full-length Lin28. (B) The sensitivity & specificity of native Lin28 detection titers hybridoma supernatant dilutions of 1000 fold.

Characterization

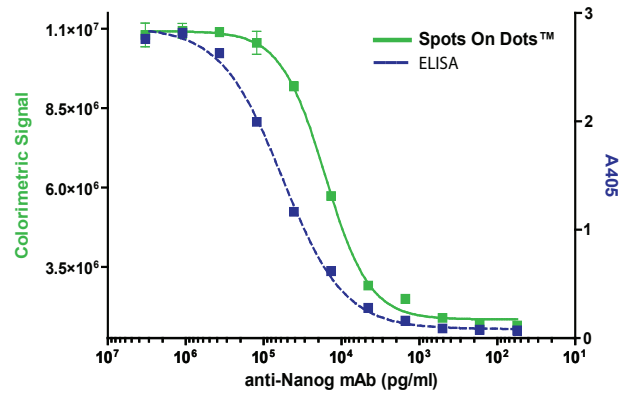


Figure 1. Antibody Sensitivity. Titered anti-Nanog mAb was tested for the ability to detect recombinant antigen immobilized on Spots On Dots™ (green line), or ELISA plates (blue line). The lowest titer of anti-Nanog mAb to register a statistically significant signal was 50 pg/ml (Spots On Dots) or 200 pg/ml (ELISA).

Antibodies & Proteins

Monoclonal Antibodies			
Product	Product #	Size	Price
FOXA2 (PR-3A6)	S2077	100 ug	\$300
FOXA2 (PR-3G1)	S2076	100 ug	\$300
Lin28 (PR-3D1)	S2110	100 ug	\$300
Lin28 (PR-3G10)	S2109	100 ug	\$300
Lin28 (PR-4C9)	S2090	100 ug	\$300
Nanog (PR-2E11)	S2096	100 ug	\$300
Nanog (PR-3F6)	S2073	100 ug	\$300
Nkx2.2 (PR-1C11)	S2116	100 ug	\$300
Nkx2.2 (PR-3B2)	S2115	100 ug	\$300
Pax6 (PR-1G2)	S2079	100 ug	\$300
Pax6 (PR-2D11)	S2078	100 ug	\$300
POU5F1 (Oct4) (PR-1A6)	S2097	100 ug	\$300
POU5F1 (Oct4) (PR-2H9)	S2084	100 ug	\$300
SOX2 (PR-4C6)	S2074	100 ug	\$300
SOX2 (PR-4E4)	S2075	100 ug	\$300
Recombinant Proteins			
Product	Product #	Size	Price
FOXA1	S2108	20 ug	\$300
FOXA2	S2101	20 ug	\$300
HNF6	S2103	20 ug	\$300
ISL1 (AA 1-100)	S2102	20 ug	\$300
Nanog	S2099	20 ug	\$300
Pax6 (AA 1-209)	S2114	20 ug	\$300
POU5F1 (Oct4) (AA 1-212)	S2105	20 ug	\$300
SOX2	S2100	20 ug	\$300
ZFP42	S2104	20 ug	\$300

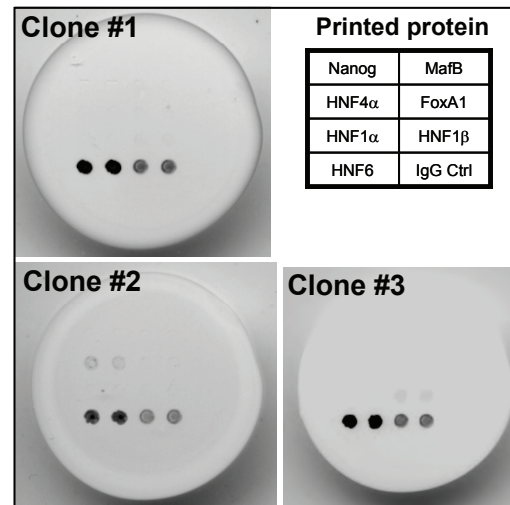


Figure 2. Antibody Specificity Testing. Recombinant HNF6 and seven control proteins were printed (in duplicate, top right). Hybridomas were generated from mice immunized with HNF6, and supernatants were screened. Although all three HNF6 clones exhibit strong binding to HNF6, only Clone #1 does not cross-react to closely related HNF1β or HNF4α.