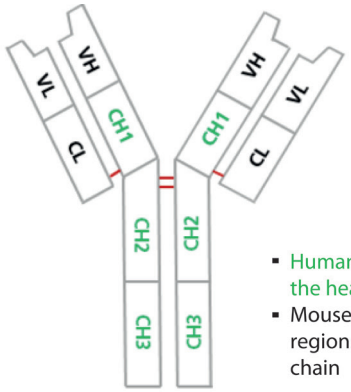
# Human Chimeric Monoclonal Antibodies

Technological breakthroughs and innovative technologies continue to shape the in vitro diagnostic field. One of these advances in assay development are chimeric monoclonal antibodies for use as positive controls, or calibrators in IVD kits as an alternative to characterized disease state plasma.

Enzyme-linked immunoassays for the detection of antibodies in patient samples require reference material to determine cut-off values and test assay integrity, and these are then included in the kit as calibrators or positive controls. Most often this reference material consists of pools of disease state serum or plasma, but main drawbacks of these standards are their limited availability and variability, and there are also safety and ethical issues. What is required is a virtually unlimited supply of antibodies with a consistent concentration, specificity and avidity.




- Human constant region of the heavy chain
- Mouse constant and variable regions of heavy and light chain

Chimeric monoclonal antibodies are produced in transgenic mouse strains in which the sequence for mouse IgG1 Fc region is substituted with the human sequence. After mouse immunization and hybridoma technology, antibodies are generated that retain a human constant region required for recognition by the anti-human conjugate. These monoclonal antibodies can then be produced using standard cell culture technologies.

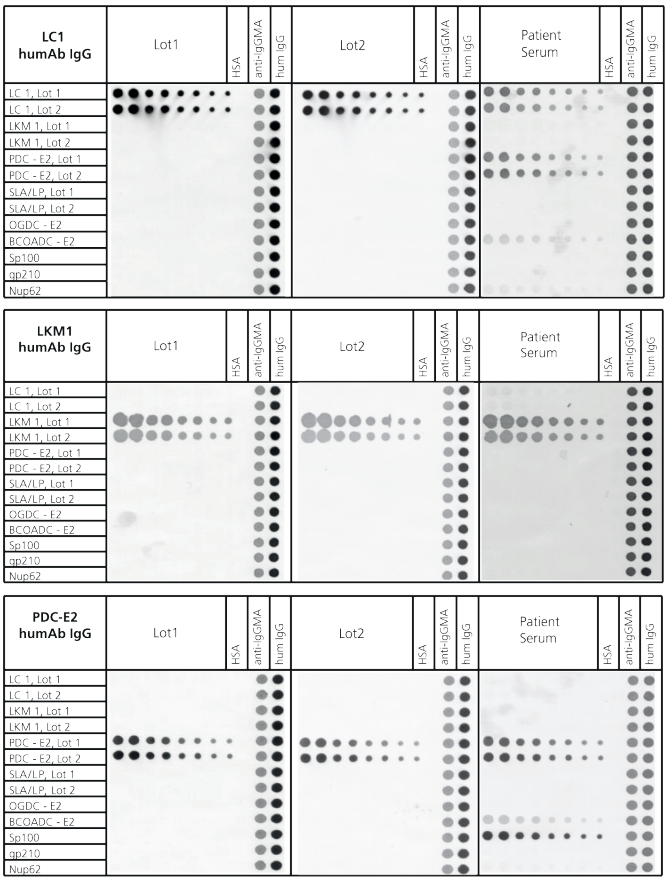


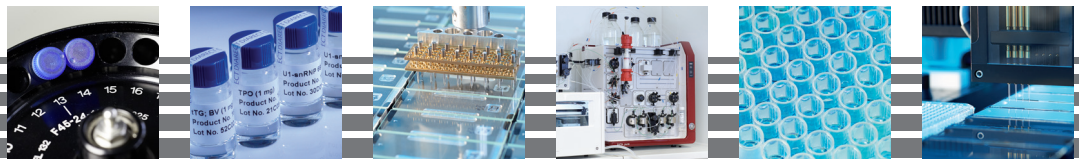

*Figure: Immunodot analysis using anti-LC1, anti-LKM1 and anti-PDC-E2 human chimeric IgG antibodies and patient samples, showing reactivity with the recombinant liver antigens LC1, LKM1 and PDC-E2. Proteins and controls were printed on nitrocellulose membranes as indicated.*

So far, DIARECT provided tissue-specific chimeric antibodies for the detection and diagnosis of autoimmune liver diseases (Figure) and SRP54 humAb IgG for myositis. Now the product line is further expanded with the introduction of Mi-2 humAb IgG and PCNA humAb IgG. Additional new products related to autoimmune liver and systemic autoimmune diseases will follow shortly.

| Ordering Information | | | |
|---|---|---|---|
| 36700 | Mi-2 humAb IgG | NEW! | 0.1 mg |
| 36600 | PCNA humAb IgG | NEW! | 0.1 mg |
| 36500 | SRP54 humAb IgG | | 0.1 mg |
| 36100<br>36101 | LC1 humAb IgG | | 0.1 mL<br>1.0 mL |
| 36400<br>36401 | LKM1 humAb IgG | | 0.1 mg<br>1.0 mg |
| 36300<br>36301 | PDC-E2 humAb IgG | | 0.1 mL<br>1.0 mL |

References:
Cogné *et al.* (2013) European Patent N°13305964.2
Invernizzi *et al.* (2008) World J Gastroenterol. 21:3374-3387





DIARECT AG · Bötzinger Str. 29 B · 79111 Freiburg · Germany
Tel. +49 761 47979-0 · Fax +49 761 47979-29 · orders@diarect.com · www.diarect.com