



## HUMAN LIVER TISSUE LYSATE

**Catalog Number:** NBP2-47094  
**Extraction 1, soluble protein fraction**  
**Human liver tumor tissue lysate** 100 µg  
**Human liver normal tissue lysate (matched)** 100 µg

**Extraction 2, insoluble protein fraction**  
**Human liver tumor tissue lysate** 100 µg  
**Human liver normal tissue lysate (matched)** 100 µg

**Diagnosis:** Hepatocellular carcinoma, Grade 2 stage II, T<sub>3</sub>N<sub>0</sub>M<sub>x</sub>

**Sex / Age:** Male, age 46 years.

**Concentration:** 1 mg/ml, 100 µg/vial.

*The vial is provided with a 10% overfill. Maximum recovery can be obtained by centrifuging the vial briefly to collect any solution on the cap and tube sides.*

**Storage:** Aliquot single use volumes to avoid repeated freeze/thaw cycles.  
From time of receipt, this product is stable for 3 months at -20°C, or 12 months at -70°C.

**Lysate Preparation:** Tissue specimens are homogenized in modified RIPA buffer to obtain the soluble proteins, and centrifuged to clarify. The pellet was further extracted with a second buffer to obtain the less soluble protein fraction. The lysate solution may appear turbid at cold temperatures due to insolubility of buffer components. The solution should clear upon warming to room temperature.

|                              |                                      |                     |           |
|------------------------------|--------------------------------------|---------------------|-----------|
| <b>Extraction 1:</b>         | PBS, pH 7.4                          | 1 µg/ml Aprotinin   | 1 mM NaF  |
| <b>Modified RIPA Buffer:</b> | 1 mM EDTA                            | 1 µg/ml Pepstatin-A | 0.1% SDS  |
|                              | 0.25% Na deoxycholate                | 1 µg/ml Leupeptin   | 1 mM PMSF |
|                              | 1 mM Na <sub>3</sub> VO <sub>4</sub> |                     |           |

**Extraction 2:** PBS, pH 7.4, 5.0 M Urea, 2.0 M Thiourea, 50mM DTT, 0.1% SDS

**Application:** These lysates have not been subjected to denaturing or reducing conditions. This allows the tissue or cell lysate to be used in a variety of applications; to study protein-protein interaction, ligand binding, ELISA, immunoprecipitation, 1D and 2D gel electrophoresis, and Western blotting for the detection of specific protein targets. For use in 1D and 2D gel electrophoresis, the addition of a denaturing gel loading buffer with reducing agents may be required.

Buffer requirements for performing protein-protein interaction and ligand binding studies can vary significantly from RIPA buffer and may require modifications. In most cases, tissue lysates in RIPA buffer can be used, directly in standard ELISA and immunoprecipitation assays.

This material has tested negative for HbsAg, HIV 1/2, and HCV. Use **UNIVERSAL PRECAUTIONS** when handling. Human tissue derivatives must be treated as a potentially infectious agent and disposed of appropriately.

**Source:** Integrated Laboratory Services-Biotech (ILSbio), Chestertown, MD 21620 [www.ilsbio.com](http://www.ilsbio.com)  
ILS-11022

# PATHOLOGY REPORT

**Catalog No.** NBP2-47094  
**Tissue:** Liver  
**Location:** Liver  
**Diagnosis:** Hepatocellular carcinoma, moderately differentiated.  
**Stage:** II T<sub>3</sub>N<sub>0</sub>M<sub>x</sub>  
**Grade:** 2  
**Sex:** Male  
**Age:** 46 years

|                    |                           |                               |                      |   |
|--------------------|---------------------------|-------------------------------|----------------------|---|
| <b>Appearance:</b> | <b><u>Macroscopic</u></b> | <b><u>Characteristics</u></b> | <b><u>+/-</u></b>    |   |
|                    | Organ:                    | Liver                         | Encapsulated:        | - |
|                    | Size:                     | 10 cm.                        | Invaded:             | + |
|                    | Color:                    | Yellow                        | Hemorrhagic:         | + |
|                    | Consistency:              | Friable                       | Cystic degeneration: | - |
|                    | Cut surface:              | Homogenous                    | Calcification:       | - |

|                            |                                  |                   |                                    |                   |
|----------------------------|----------------------------------|-------------------|------------------------------------|-------------------|
| <b>Histologic pattern:</b> | <b><u>Cell distribution:</u></b> | <b><u>+/-</u></b> | <b><u>Structure / Pattern:</u></b> | <b><u>+/-</u></b> |
|                            | Diffuse:                         | -                 | Streaming:                         | -                 |
|                            | Mosaic:                          | +                 | Storiform:                         | -                 |
|                            | Necrosis:                        | -                 | Fibrosis:                          | -                 |
|                            | Lymphocytic infiltration:        | +                 | Pallisading:                       | -                 |
|                            | Vascular invasion:               | -                 | Cystic degeneration:               | -                 |
|                            | Clusterized:                     | +                 | Bleeding:                          | +                 |
|                            | Alveolar formation:              | +                 | Myxoid change:                     | -                 |
| Indian file:               | -                                | Psammoma body:    | -                                  |                   |

|                                  |                         |                      |                            |                   |                            |                   |
|----------------------------------|-------------------------|----------------------|----------------------------|-------------------|----------------------------|-------------------|
| <b>Cellular differentiation:</b> | <b><u>Squamous:</u></b> | <b><u>+/-</u></b>    | <b><u>Adenomatous:</u></b> | <b><u>+/-</u></b> | <b><u>Sarcomatous:</u></b> | <b><u>+/-</u></b> |
|                                  | Squamoid:               | -                    | Glandular cell:            | +                 | Round cell:                | -                 |
|                                  | Spindle:                | -                    | Cell stratification:       | +                 | Spindle cell:              | -                 |
|                                  | Keratin:                | -                    | Secretion:                 | +                 | Leiomyoblast:              | -                 |
|                                  | Desmosome:              | -                    | Intracellular vacuole:     | +                 | Lipoblast:                 | -                 |
| Pearl:                           | -                       | Glandular formation: | +                          | Rhadomyoblast:    | -                          |                   |

|                        |                                   |                 |                 |                  |                   |
|------------------------|-----------------------------------|-----------------|-----------------|------------------|-------------------|
| <b>Nuclear atypia:</b> | <b><u>Nuclear Appearance:</u></b> | <b><u>0</u></b> | <b><u>I</u></b> | <b><u>II</u></b> | <b><u>III</u></b> |
|                        | Anisonucleosis:                   |                 |                 | X                |                   |
|                        | Hyperchromatism:                  |                 |                 | X                |                   |
|                        | Nucleolar prominent:              |                 |                 | X                |                   |
|                        | Multinucleated giant cell:        |                 |                 | X                |                   |
|                        | Mitotic activity:                 |                 |                 | X                |                   |
| Nuclear grade:         |                                   |                 | X               |                  |                   |