

LTL-637 datasheet

Origin	Primary human lung cancer	Histopathology	Non-small cell lung cancer
Year of establishment	2006	Doubling time	3.5 days (sub-renal)
Local invasion	Yes	Metastasis	Yes
Drug sensitivity	Not determined		

The LTL-637 was developed from a patient's primary lung cancer (Non-small cell lung cancer. Stage T1N0M0). Histopathologically, it closely resembles the patient's tumor (Figs 1, 2). When grafted under the renal capsules of SCID mice, the LTL-637 shows local invasion into adjacent host kidney parenchyma and metastasis to distant organs.

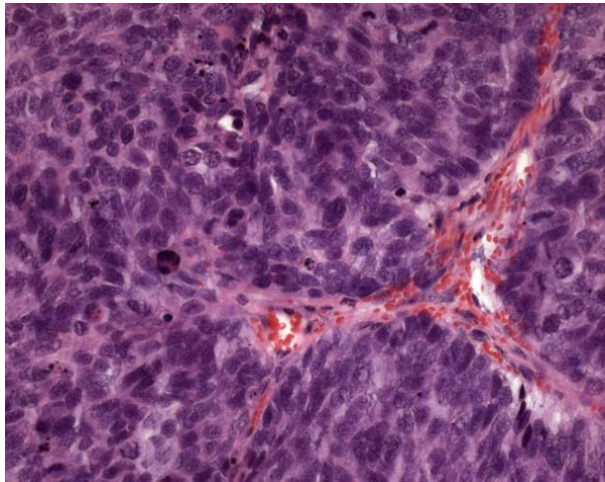


Fig. 1. H&E stained LTL-637 tissue sections.

Showing a poorly differentiated non-small cell carcinoma with histopathological characteristics similar to those of the original patient's cancer (Fig. 2). (x400)

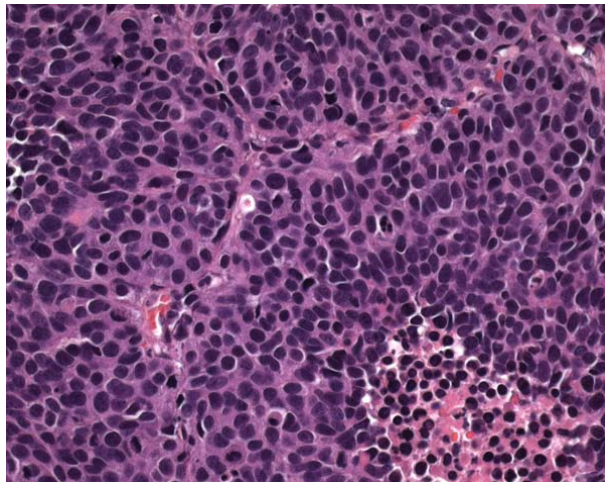


Fig. 2. Patient's cancer tissue before grafting.

The tumor is composed of solid, cohesive sheets of tumor cells with oval to round nuclei and coarse chromatin. (x400)

Genetic and epigenetic characteristics

The LTL- 637 tissue line has been characterized using array CGH and Affymetrix chips. Some of the genes with potential therapeutic application are listed below.

Tissue microarrays containing LTL-637 tissue are available for screening potential molecular targets.

LTL-637 gene expression profile

Genes	Expression in LTL-637	Current stage in drug development
ERCC1	++	Clinical
RRM1	++++	Clinical
PTEN	++	Clinical
BRCA1	++	Clinical
EGFR	+	Clinical
HER (erb-B)	++	Clinical
KRAS	++++	Clinical
P27	++	Clinical
MRP2	/	Clinical
FasL	+	Clinical
bTubIII (tubulins)	/	Clinical
VEGFR-1	/	Clinical
VEGFR-2	/	Clinical
VEGFR-3	/	Clinical
PDGFR	++++	Clinical
CD117 (cKIT)	/	Clinical
RET	++++	Clinical
CSF-1R	/	Clinical
CTLA-4	/	Clinical
CD28	-	Pre-clinical
TLR9	/	Pre-clinical
IGF1R	++	Pre-clinical
ACVRL1 (ALK1)	+	Pre-clinical
FAK	/	Pre-clinical
Aurora Kinase (AK)	+++	Pre-clinical
mTOR	/	Pre-clinical
c-Met	/	Pre-clinical
Bcl-2	/	Pre-clinical
COX-2	-	Pre-clinical
PCK alpha	++	Pre-clinical

Applications

1. Pre-clinical evaluation of existing and potential anticancer drugs. Examination of drug efficacy on tumor growth, cell death (apoptosis, necrosis), tissue invasion, metastasis and angiogenesis.
2. Discovery of potential therapeutic targets and/or biomarkers for drug sensitivity.

3. Study of mechanisms underlying tumor growth, progression and metastasis.

References

1. Wang et al., Laboratory Investigation (2005) 85, 1392-1404

2. Cutz et al, Clin. Cancer Res. 12(13): 4043-4054 (2006).

3. Lin et al, Cancer Research 68 p.4352-4359 (2008)

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