LTL-675 datasheet

Origin	Primary human lung cancer	**Histopathology**	Adenocarcinoma
Year of establishment	2006	**Doubling time**	9 days (sub-renal)
Local invasion	Yes, limited	**Metastasis**	No
Drug sensitivity	Cisplatin 2.5 mg/kg + Gemcitabine 120 mg/kg (T/C = 18.42%, responder), SAHA 100 mg/kg q7d X 2 (T/C = 45.42%, non-responder).		

The LTL-675 was developed from a patient's primary lung cancer (Moderately differentiated adenocarcinoma. Stage T1NXM0). Histopathologically, it closely resembles the patient's tumor (Figs 1, 2). When grafted under the renal capsules of SCID mice, the LTL-675 shows limited local invasion into adjacent host kidney parenchyma. No metastasis was observed.

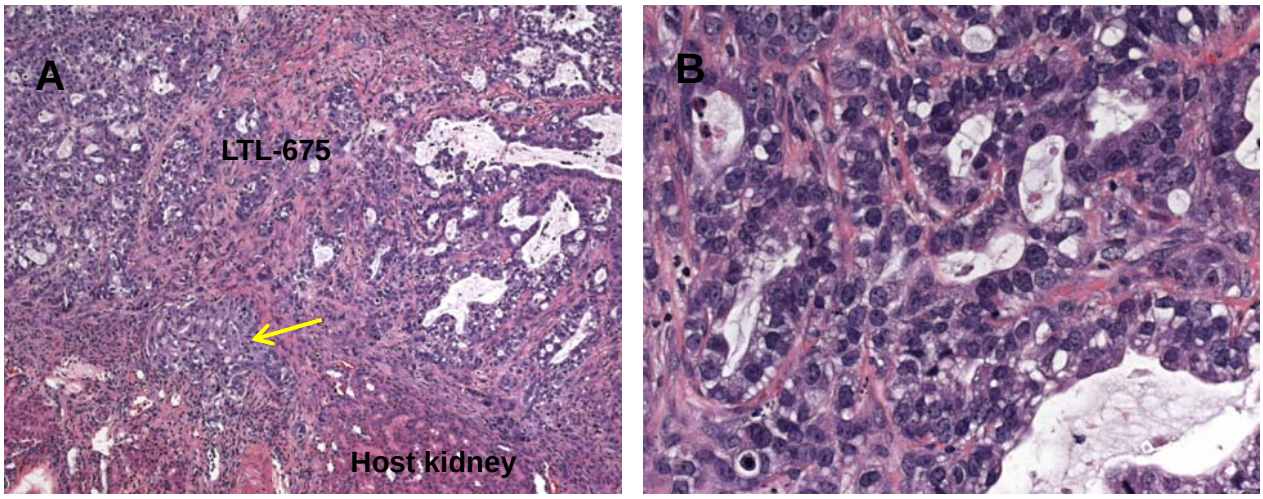

Fig. 1. H&E stained LTL-675 tissue sections.
(A). Showing a moderately differentiated adenocarcinoma with local invasion into adjacent host kidney (arrow) (x100); **(B).**At higher magnification, showing histopathological characteristics similar to those of the original patient's cancer (Fig. 2).

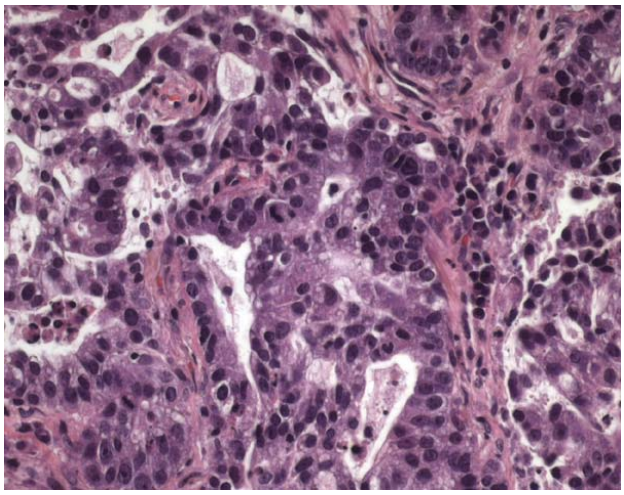

Fig. 2. Patient's cancer tissue before grafting.

Showing a moderately differentiated adenocarcinoma is composed of cuboidal cells forming tubular structures. (x400)

Genetic and epigenetic characteristics

The LTL-675 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-675 tissue are available for screening potential molecular targets.

LTL-675 gene expression profile

Genes	Expression in LTL-675	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, and angiogenesis.

2. Discovery of potential therapeutic targets and/or biomarkers for drug sensitivity.

3. Study of mechanisms underlying tumor growth and progression.

References

1. Wang et al., Lab Invest (2005) 85, 1392-1404

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

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

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