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LIFE SCIENCES **SCHEDA BREVETTO NUMERO 25**

TITOLO

Peptides and aptamers thereof as specific modulators of mutant P53 function

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TITOLARI

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DESCRIZIONE E SETTORI DI APPLICAZIONE

Mutations in the p53 tumor suppressor gene are frequently found in human tumors and mutant p53 proteins actively collaborate with tumor progression. Interfering with mutant p53 function may represent a valid strategy to block tumor growth and development of aggressive phenotypes. As a consequence of the characteristic of peptide aptamers (PAs) to efficiently and selectively bind a target protein, they are able to interfere with its function and in its ability to interact with other partners. In the present application isolated peptides and aptamers thereof able to interact with structural and conformational p53 mutants within the region of the wild-type p53 DNA binding core domain comprised from amino acids 74 to amino acids 298using the yeast two-hybrid method are disclosed. These PAs are able to efficiently recognize several different p53 point mutants but not wild-type p53. Therefore the peptides and aptamers identified can be useful as inhibitors of mutant p53-associated pro-oncogenic functions for anticancer therapy or as diagnostic tools for mut-p53 or wild-type p53 or as template for designing new peptido-mimetic drugs able to specifically target tumor cells.

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VANTAGGI

Alta attività e specificità.
Trascurabile legame aspecifico a strutture molecolari diverse dal bersaglio.
Minore accumulo nei tessuti e minore tossicità.

STATUS

http://v3.espacenet.com/publicationDetails/biblio?DB=EPODOC&adjacent=true&locale=en_EP&FT=D&date=20090917&CC=WO&NR=2009112075A1&KC=A1

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Figure 1

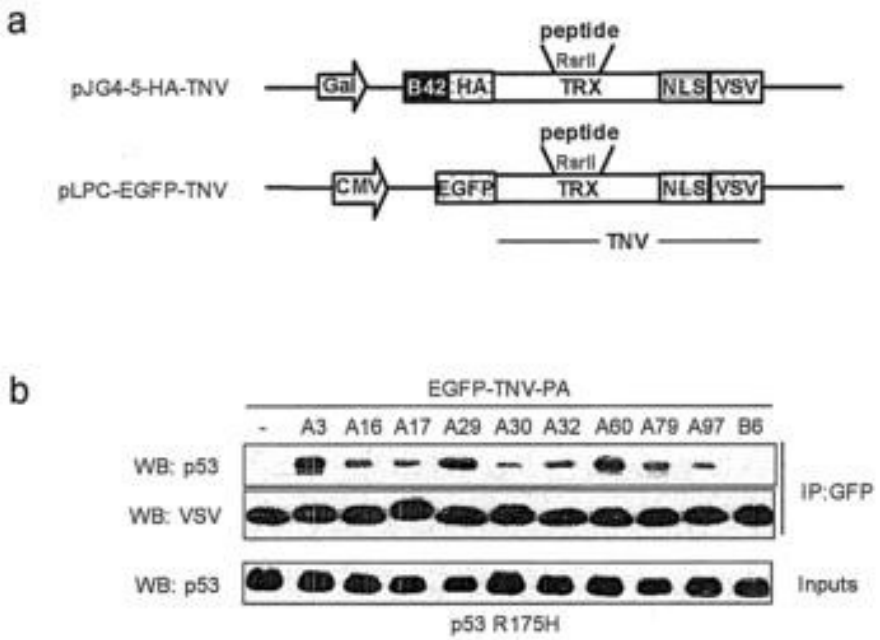

Figure 1. Identification of peptide aptamers (PAs) interacting with mutant p53.

(a) Schematic representation of the pJG4-5-HA-TNV yeast two hybrid vector and of the pLPC-EGFP-TNV mammalian expression vector.
(b) Interaction of EGFP-TNV- PAs with p53R175H was analyzed by co- immunoprecipitation upon expression in H1299 cells.