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(71) Applicant: **MEDIGENE IMMUNOTHERAPIES GMBH** [DE/DE]; Lochhamer Strasse 11, 82152 Planegg-Martinsried (DE).

(72) Inventors: **LONGINOTTI, Giulia**; Christrosenweg 8, 81377 München (DE). **CATARINELLA, Mario**; Niederhiedernstr. 9, 81375 München (DE). **DAVARI, Kathrin**; Ulmenstr. 14, 82362 Weilheim (DE). **SALVERMOSER, Melanie**; Richard-Wagner-Weg 4, 82178 Puchheim (DE).

(74) Agent: **WEINZIERL, Gerhard** et al.; c/o Schiweck Weinzierl Koch, Ganghoferstrasse 68b, 80339 Munich (DE).

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(54) Title: T-CELL RECEPTOR AGAINST mKRAS<sub>7-16</sub> G12V

(57) Abstract: The present invention relates to a TCR characterized by its CDR sequences of the  $\alpha$  chain variable region and the  $\beta$  chain variable region and by its antigenic specificity to a particular mutated KRAS epitope or a fragment thereof presented in the context of a MHC class I molecule. The present invention further relates to a nucleic acid, a vector, and a host cell comprising the abovementioned. The present invention further relates to a method for obtaining said TCR and to a pharmaceutical or diagnostic composition. The invention also relates to the abovementioned for use as a medicament or for use in a method of diagnosing, detecting, preventing, and/or treating cancer. Further, the invention relates to a method of detecting the presence of a cancer in a subject *in vitro*, by applying within said method said TCR, said nucleic acid, said vector, said host cell, and/or said pharmaceutical composition, and the use of said TCR, said nucleic acid, and/or said vector for generating modified lymphocytes. Finally, the present invention relates to a kit.

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