**Table I : Classification and characteristics of the human RTKs**

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| --- | --- | --- | --- |
| **Class**  | **Family name** | **Members** | **Molecular characteristics of the extracellular domains** |
| **I** | EGFR | EGFR, ERBB2, ERBB3, ERBB4 | 2 cysteine-rich domains |
| **II** | Insulin R | INSR IGFR | 2 chains  and, with one cysteine-rich and 2 FNIII domains |
| **III** | PDGFR | PDGFR, PDGFR, M-CSFR, KIT, FLT3L | 5 Ig-like domains |
| **IV** | VEGFR | VEGFR1, VEGFR2, VEGFR3 | 7 Ig-like domains |
| **V** | FGFR | FGFR1, FGFR2, FGFR3, FGFR4 | 3 Ig-like domains, 1 acidic box |
| **VI** | CCK | CCK4 | 7 Ig-like domains |
| **VII** | NGFR | TRKA, TRKB, TRKC | 2 Ig-like domains, rich leucin domains |
| **VIII** | HGFR | MET, RON | 1 transmenbrane  chain linked with one extracellular  chain |
| **IX** | EPHR | EPHA1 to 6, EPHB1 to 6 | 1 Ig-like, 1 Cysteine-rich and 2 FNIII-like domains |
| **X** | AXL | AXL, MER, TYRO3 | 2 Ig-line, 2 FNIII-like domains |
| **XI** | TIE | TIE, TEK | 2 Ig-like, 1 EGF, and 3 FNIII-like domains |
| **XII** | RYK | RYK | 1 transmenbrane  chain linked with one extracellular chain |
| **XIII** | DDR | DDR1, DDR2 | 1 discoidin-like domain |
| **XIV** | RET | RET | 1 cadherin-like domain |
| **XV** | ROS | ROS | 6 FNIII-like domains |
| **XVI** | LTK | LTK, ALK | 1 cysteine-rich domain |
| **XVII** | ROR | ROR1, ROR2 | 1 Ig-domain, 1 cysteine-rich domain and one kringle-like domains |
| **XVIII** | MUSK | MUSK | 4 Ig-like and 1 cysteine-rich domains |
| **XIX** | LMR | AATYK1, AATYK2, AATYK3 | A short extracellular domain |
| **XX** | Undetermined | RTK106 | A short receptor chain with a short extracellular domain |

EGFR : epidermal growth factor receptor; InsR : insulin receptor; PDGFR : platelet-derived growth factor receptor; VEGFR : vascular endothelial growth factor receptor; FGFR : fibroblast growth factor receptor; CCK : colon carcinoma kinase; NGFR, nerve growth factor receptor; HGFR : hepatocyte growth factor receptor ; EphR : ephrin receptor; Axl : a Tyro3 PTK; TIE : tyrosine kinase receptor in endothelial cells; RYK : receptor related to tyrosine kinases; DDR : discoidin domain receptor; Ret : rearranged during transfection; ROS : RPTK expressed in some epithelial cell types; LTK : leukocyte tyrosine kinase; ROR : receptor orphan; MuSK : muscle-specific kinase; LMR : Lemur. Ig : immunoglobulin ; FN : fibronectin. (From Blume-Jensen and Hunter [10])