

Type XVIII RTKs: LMR family in GtoPdb v.2025.3

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Abstract

The lemur tail kinase (LMR) family are unusual amongst the RTKs in possessing a short extracellular domain and extended intracellular domain (hence the 'Lemur' name reflecting the long tail). LMR1 was identified as a potential marker of apoptosis [2], giving rise to the name AATYK (Apoptosis-Associated Tyrosine Kinase); while over-expression induces differentiation in neuroblastoma cells [3]. The LMTK/LMR family have since been identified to have serine/threonine kinase activity, as opposed to tyrosine kinase [4].

Contents

This is a citation summary for Type XVIII RTKs: LMR family in the [Guide to Pharmacology](#) database (GtoPdb). It exists purely as an adjunct to the database to facilitate the recognition of citations to and from the database by citation analyzers. Readers will almost certainly want to visit the relevant sections of the database which are given here under database links.

[GtoPdb](#) is an expert-driven guide to pharmacological targets and the substances that act on them. GtoPdb is a reference work which is most usefully represented as an on-line database. As in any publication this work should be appropriately cited, and the papers it cites should also be recognized. This document provides a citation for the relevant parts of the database, and also provides a reference list for the research cited by those parts. For further details see [1].

Please note that the database version for the citations given in GtoPdb are to the most recent preceding version in which the family or its subfamilies and targets were substantially changed. The links below are to the current version. If you need to consult the cited version, rather than the most recent version, please contact the GtoPdb curators.

Database links

Type XVIII RTKs: LMR family

<https://www.guidetopharmacology.org/GRAC/FamilyDisplayForward?familyId=658>

Receptors

[Lmr1\(apoptosis associated tyrosine kinase\)](#)

<https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=1922>

[Lmr2\(lemur tyrosine kinase 2\)](#)

<https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=2056>

[Lmr3\(lemur tyrosine kinase 3\)](#)

<https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=2057>

References

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2. Gaozza E, Baker SJ, Vora RK and Reddy EP. (1997) AATYK: a novel tyrosine kinase induced during growth arrest and apoptosis of myeloid cells. *Oncogene* **15**: 3127-35 [PMID:9444961]
3. Raghunath M, Patti R, Bannerman P, Lee CM, Baker S, Sutton LN, Phillips PC and Damodar Reddy C. (2000) A novel kinase, AATYK induces and promotes neuronal differentiation in a human neuroblastoma (SH-SY5Y) cell line. *Brain Res Mol Brain Res* **77**: 151-62 [PMID:10837911]

4. Wendler F, Purice TM, Simon T, Stebbing J and Giamas G. (2021) The LMTK-family of kinases: Emerging important players in cell physiology and pathogenesis. *Biochim Biophys Acta Mol Basis Dis* **1867**: 165372 [[PMID:30597196](#)]