

Genus Datasheet

Datasheet No. P-030.002
(Family.Genus)

DBT- Network Programme

1. Genus: *Adiantum* L.

2. Systematic Position:

Christenhusz 2011

- Class: Equisetopsida C.Agardh
- Subclass: Polypodiidae Cronquist, Takht. & Zimmerm.
- Order: Polypodiales Link.
- Family: Pteridaceae E.D.M. Kirchn
- Subfamily: Vittarioideae (C. Presl) Crabbe, Jermy & Mickel
- Genus: *Adiantum* L.

3. Species:

Global: Accepted (171), unassessed (328)

India:.

4. Taxonomic riddles:¹¹⁴

5. Distribution:

Global:

India:

6. Habit and Habitat:

7. Economic Importance:

8. DNA content range:

Methodology

2C (10.25pg) ²

Flow cytometry²Bainard et al 2011

9. Basic chromosome number(s): $x=29$ ^{17, 28, 36, 39, 42, 54, 61, 65, 72, 73, 74, 100},

³⁰^{1, 6, 7, 8, 12, 14, 15, 16, 17, 19, 20, 21, 24, 25, 26, 28, 29, 30, 31, 32, 33, 34, 37, 38, 39, 40, 41}

^{50, 51, 52, 53, 56, 57, 63, 64, 66, 67, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 81, 83, 84, 87, 88}

^{94, 95, 96, 97, 98, 99, 100, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113}

10. Zygotic chromosome number(s): $2n=58$ ^{36, 72, 73, 74, 112},

⁶⁰^{1, 4, 9, 22, 23, 30, 31, 32, 33, 35, 41, 44, 46, 55, 58, 60, 67, 69, 70, 71, 72, 73, 74, 75, 76, 77, 81, 87, 88, 91, 92,}

⁷⁰⁸¹,

¹¹⁴^{1, 96},

¹¹⁵³,

⁹⁰^{1, 4, 42, 72},

^{90 (synthetic)}^{102, 103},

^{c.120}¹¹²,

^{120 (synthetic)}^{37, 102, 103, 110},

¹²⁰^{4, 45, 73, 74, 75, 88, 107},

^{120 (due to misdivision during spore formation)}⁷⁴

¹⁷¹^{1, 17},

¹⁸⁰^{73, 74},

^{58, 60, 87, 118, 120}⁵⁹,

²²⁸⁵

^{1,6, 7, 8, 12, 17, 20,21, 24, 25, 26, 28, 29, 32, 33, 37, 38, 39, 40, 41, 44, 45, 46, 50, 51, 52, 53, 56, 57, 63, 64, 66, 76, 78, 79, 81, 83, 84, 85, 88, 90, 91, 93, 94, 95, 97, 98, 99, 100, 102, 103, 104, 105,106, 108, 109, 110, 112, 113},
³¹ ^{57, 66},
⁵⁷^{1, 5, 18, 80},
⁵⁸ ^{17, 61, 62},
⁶⁰^{1, 5, 8, 18, 24,14, 15, 16,19, 27, 28, 29, 47, 44, 49, 50, 51, 52, 53, 57, 60, 66,84, 85, 88, 89, 90, 100, 101, 106, 108, 109, 110, 112, 113},
⁸⁷ ¹⁷,
⁸⁸⁴⁸,
⁹⁰ ^{1, 10, 11, 14, 15, 16, 17, 27, 28, 29, 49, 50, 51, 52, 53, 63, 72, 73, 74, 75, 76, 79, 80, 83, 84, 85, 88, 89, 90, 91, 93, 94, 95, 97, 98, 99, 100, 102, 103, 104, 105,106, 108, 109, 110, 112, 113},
^{101, 109},
¹¹⁴ ^{5, 6, 18, 20, 21, 39, 40},
¹⁷¹^{1, 17,20, 40, 96},
¹⁷⁰⁻¹⁸⁰ ⁴²,
c.75 (abnormal SMCs due to amitotic divisions in sporangium) ⁸⁵,
²²⁸^{5,43}

12. Specialized chromosomes (B chromosomes/Sex chromosomes/Polytene Chromosomes/

Neocentric chromosomes):

13. Ploidylevel:Diploid (sexual)^{1, 4,6, 7, 8, 12, 14, 15, 16, 17,20, 21, 24, 25, 26, 28, 29, 30, 31, 32, 33, 37, 38, 39, 40, 41, 44, 45, 46, 50, 51, 52, 53, 56,57, 59, 63, 64, 66, 67, 71, 72, 73, 74, 75, 76, 77, 78, 79, 81, 83, 84, 85, 87, 88, 90, 91, 92, 93, 100, 102, 103, 104, 105, 106, 108, 109, 110, 112, 113},
Diploid (aneuploid) ^{28, 39, 42, 54, 59, 65, 100},
Diploid (apogamous) ^{27, 28, 47, 49, 51, 52, 53,100},
Trinloid ^{1, 4, 42}.

Triploid (hybrid) ¹ ,

Tetraploid (sexual) ^{1,4, 5, 14, 15, 16, 18, 24, 28, 29, 42, 44, 45, 50, 51, 52, 53, 57, 59, 60, 66,72, 77, 83, 84, 85, 100,106,107, 108, 112} ,

Tetraploid (aneuploid) ^{1, 3, 5,17, 18, 59, 61, 62, 80, 112} ,

Hexaploid (sexual) ³⁸ ,

Hexaploid (sterile hybrid) ^{73, 74} ,

Hexaploid (aneuploid) ¹ ,

Hexaploid (aneuploid, apogamous) ^{1,17} ,

Octoploid (aneuploid) ^{5, 6, 18, 20, 21, 39, 40} ,

12-ploid (aneuploid, sexual) ^{20, 40, 96} ,

16-ploid (aneuploid) ^{5, 43}

14. Nature of polyploidy (auto, segmental, allo, autoallo): Amphidiploid ⁸⁷ ,

Allotetraploid ⁹⁰ ,

Segmental allopolyploid ⁴⁴

15. Aberrant chromosome number(s) (aneuploidy, aneusomaty, polysomaty):

16. Karyograms:

Meiosis: ^{1, 5, 12, 13, 14, 15, 16,17, 18, 20, 24, 26,27, 28, 29,32, 33, 37, 38, 39,40, 42, 44, 47,49, 56, 57, 61, 62,63, 65, 66,67, 69, 70, 71, 72, 73, 74, 75, 76, 77, 79, 80, 83, 84, 85, 86, 87, 89, 91, 98, 99, 100, 101, 102, 103, 106, 107, 108, 109, 112, 113}

17. Banding pattern(s):

19. Phylogenetic relationship at Chromosomal; DNA level: ¹¹⁴

20. Cytogenetic mechanism (s) underlying evolution:

21. Linkage map:

22. Any other information: