CLAIMS

1. A polypeptide having binding specificity for IL-17A, wherein the polypeptide comprises a lipocalin mutein that binds IL-17A with a K_D of about 1 nM or lower, wherein the lipocalin mutein has at least 85% identity to the amino acid sequence of SEQ ID NO: 1, and

   wherein the lipocalin mutein comprises the following mutated amino acid residues at the sequence positions 26-33, 56, 58, 60-61, 64, 92, 101, 104-106, 108, 111, 114 and 153 of the linear polypeptide sequence of mature human tear lipocalin (SEQ ID NO: 69): Arg 26 → Phe; Glu 27 → Trp; Phe 28 → Cys; Pro 29 → Ser; Glu 30 → Gly; Met 31 → Ile; Asn 32 → His; Leu 33 → Glu; Leu 56 → Asp; Ser 58 → Glu; Arg 60 → Phe; Cys 61 → Leu; Val 64 → Phe; His 92 → Arg; Cys101 → Ser; Glu 104 → Asp; Leu 105 → Cys; His 106 → Pro; deletion of Lys 108; Arg 111 → Pro; Lys 114 → Trp; and Cys 153 → Ser.
2. The polypeptide of claim 1, wherein said lipocalin mutein is crossreactive with human IL-17A, cynomolgus IL-17A, and marmoset monkey IL-17A.
3. The polypeptide of claim 1 or 2, wherein said lipocalin mutein binds IL-17A with a K_D value lower than that of SEQ ID NO: 42.
4. The polypeptide of any one of claims 1 to 3, wherein said lipocalin mutein inhibits the binding of IL-17A to its receptor IL-17RA and/or blocking IL-17A induced G-CSF secretion with an EC_{50} value lower than that of SEQ ID NO: 42.
5. The polypeptide of any one of claims 1 to 4, wherein said lipocalin mutein has at least 90% identity to the amino acid sequence of SEQ ID NO: 1.
6. The polypeptide of any one of claims 1 to 5, wherein

   (a) said lipocalin mutein is conjugated to a compound selected from the group consisting of an organic molecule, an enzyme label, a radioactive label, a colored label, a fluorescent label, a chromogenic label, a luminescent label, a hapten, digoxigenin, biotin, a cytostatic agent, a toxin, a metal complex, a metal, and colloidal gold;

   (b) said lipocalin mutein is fused at its N-terminus and/or its C-terminus to a moiety which is a protein, a protein domain, or a peptide; or

   (c) said lipocalin mutein is conjugated to a moiety that extends the serum half-life of the mutein.

7. A method of detecting the presence of IL-17A in a sample, the method comprising contacting the sample with a polypeptide of any one of claims 1 to 6, under conditions that allow the formation of complex of the first polypeptide and IL-17A.
8. The polypeptide of claim 1, wherein the polypeptide further comprises
   (a) a lipocalin mutein that has binding specificity for IL-23p19;
   (b) an albumin binding domain (ABD) or an albumin binding peptide;
   (c) an Fc-part of a human antibody, or
   (d) a TNF-inhibiting protein.
9. Use of a polypeptide of any one of claims 1 to 6 or 8, or of a composition comprising such polypeptide for the manufacture of a pharmaceutical composition for the binding of IL-17A in a subject.
10. Use of a polypeptide of any one of claims 1 to 6 or 8, or of a composition comprising such polypeptide the manufacture of a pharmaceutical composition for inhibiting the binding of IL-17 to its receptor IL-17RA and/or blocking IL-17A induced G-CSF secretion in a subject.
11. A kit comprising at least one polypeptide of any one of claims 1 to 6 or 8 and one or more instructions for using the kit.
12. A nucleic acid molecule comprising a nucleotide sequence encoding a polypeptide of any one of claims 1 to 6 or 8.
13. A host cell containing a nucleic acid molecule of claim 12.
14. A method of producing a polypeptide of any one of claims 1 to 6 or 8, wherein the polypeptide is produced starting from the nucleic acid coding for the polypeptide.