

CLAIMS

1. An antibody or a functional fragment thereof capable of binding to human tumor necrosis factor alpha (TNF α), wherein said antibody or functional fragment comprises (i) a V_L domain having the amino acid sequence as shown in SEQ ID NO:14and
5 (ii) a V_H domain having the amino acid sequence as shown in SEQ ID NO:13.
2. The functional fragment of claim 1, which is a single-chain variable fragment (scFv).
3. The functional fragment of claim 2, wherein said scFv has the amino acid sequence as shown in SEQ ID NO:15.
4. The antibody of claim 1, which is an immunoglobulin G (IgG).
- 10 5. The antibody or functional fragment of any one of the preceding claims, wherein the sum of (i) the number of amino acids in framework regions I to III of the variable light domain of said antibody or functional fragment that are different from the respective human Vk1 consensus sequences with SEQ ID NOs: 56 to 58, and (ii) the number of amino acids in
15 framework region IV of the variable light domain of said antibody or functional fragment that are different from the most similar human λ germline-based sequence selected from SEQ ID NOs: 59 to 62, is less than 7, preferably less than 4.
6. The antibody or functional fragment of any one of the preceding claims, wherein the framework regions I to III of the variable light domain of said antibody or functional fragment consist of human Vk1 consensus sequences with SEQ ID NOs:56 to 58, respectively, and
20 framework region IV consists of a λ germline-based sequence selected from SEQ ID NOs:59 to 62.
7. A nucleic acid encoding the antibody or functional fragment of any one of the preceding claims.
8. A vector or plasmid comprising the nucleic acid of claim 7.
- 25 9. A cell comprising the nucleic acid of claim 7 or the vector or plasmid of claim 8.
10. A method of preparing the antibody or functional fragment of any one of claims 1 to 6, comprising culturing the cell of claim 9 in a medium under conditions that allow expression of the nucleic acid encoding the antibody or functional fragment, and recovering the antibody or functional fragment from the cells or from the medium.

11. A pharmaceutical composition comprising the antibody or functional fragment of any one of claims 1 to 6, and optionally a pharmaceutically acceptable carrier and/or excipient.
12. Use of the antibody or functional fragment as defined in any one of claims 1 to 6 for the manufacturing of a medicament for treating an inflammatory disorder.
- 5 13. The use according to claim 12, wherein said inflammatory disorder is an inflammatory disorder of the gastrointestinal tract.
14. The use according to claim 13, wherein said inflammatory disorder of the gastrointestinal tract is inflammatory bowel disease.
15. The use according to claim 13 or 14, wherein said inflammatory disorder of the
10 gastrointestinal tract is Crohn's disease or ulcerative colitis.