

SEARCH HISTORY

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| Application Number | PCT/US 20/25469 |
| Search Conducted By | DAM |
| Search Approved By | DAM |

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| US/IPC/CPC Classifications Searched | IPC(8): C07K 16/46; C07K 16/00 (2020.01) CPC: C07K 16/46; C07K 16/468; C07K 2317/52; C07K 2317/526 |
| Date Conducted | 30 June 2020 |

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| Documentation Searched | CPC: C07K 16/46; C07K 16/468; C07K 2317/52; C07K 2317/526(text search) |
| Search Terms Used | Heteromultimeric proteins, heavy chain heterodimerization, heavy chain constant domain 2 (CH3) having a substitution relative to a wild type CH3 domain, bulky substitution at S354 to S345Y, S354W, S354F, interaction with Y349, knobs-in-holes |
| Date Conducted | 30 June 2020 |

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| Electronic Database Searched | PatBase |
| Files Searched | Full-text: AU BE BR CA CH CN DE DK EP ES FI FR GB IN JP KR SE TH TW US WO Bibliographic: (Europe) AT BA BE BG CH CS CY CZ DD DK EE ES FI GE GR HR HU IE IS IT LT LU LV MC MD MT NL NO PL PT RO RS SE SI SK SM TR UA YU (Asia) EA GC HK ID IL IN KZ MN MY PH RU SG SU TH TJ TW UZ VN (North America) CA CR CU DO GT HN MX NI PA SV TT (South America) AR BR CL CO EC PE UY (Australasia) AU NZ (Africa) AP DZ EG KE MA MW OA ZA ZM ZW |
| Date Conducted | 30 June 2020 |

Search Logic:

Search 1: CPC=(C07K16/46 or C07K16/468 or C07K2317/52 or C07K2317/526) (Results 3731)
 Search 2: IC=(C07K16/46 or C07K16/00) (Results 29628)
 Search 3: 1 or 2 (Results 30578)
 Search 4: 3 and FT=((heterodimer*) and (heavy chain)) (Results 5397)
 Search 5: 4 and FT=((CH3) W20 (substitution or muta*)) (Results 1030)
 Search 6: 5 and FT=((CH3) W20 (mutant pair)) (Results 3)
 Search 7: 6 and FT=(S354% and Y349%) (Results 1)
 Search 8: 5 and FT=(S354% and Y349%) (Results 274)
 Search 9: 8 and FT=(S354Y) (Results 1)
 Search 10: 8 and FT=(S354V) (Results 2)
 Search 11: 8 and FT=(S354W) (Results 2)
 Search 12: 8 and FT=(S354F) (Results 0)
 Search 13: (9 or 10 or 11) and FT=(Y349%) (Results 4)
 Search 14: 13 and FT=(Y349A or Y349S or Y349G or Y349V) (Results 1)
 Search 15: FT=((heterodimer*) and (heavy chain)) (Results 16644)
 Search 16: 15 and FT=((CH3) W10 (substitution or muta*)) (Results 1279)
 Search 17: 16 and FT=(S354% and Y349%) (Results 299)
 Search 18: 17 and FT=(S354Y or S354W) (Results 2)
 Search 19: 17 and FT=(S354F or S354V) (Results 2)
 Search 20: (18 or 19) and FT=FT=(Y349A or Y349S or Y349G or Y349V) (Results 1)

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| Electronic Database Searched | Google |
| Files Searched | Google Patents |
| Date Conducted | 30 June 2020 |
| Search Logic: | |
| CH3 domain mutations enabling bispecific Ig About 12,856 results (CH3 domain mutant pair)(heterodimeric Fc) About 8,367 results (CH3 domain mutant pair)(heterodimeric Fc)(S354)(Y349) About 76 results (CH3 domain mutant pair)(S354W) About 3 results (CH3 domain mutant pair)(S354Y) About 1 results (CII3 domain mutant pair)(S354V) About 3 results (CH3 domain mutant pair)(S354F) About 15 results | |

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| Electronic Database Searched | Google |
| Files Searched | Google Scholar |
| Date Conducted | 30 June 2020 |
| Search Logic: | |
| CH3 domain mutations enabling bispecific Ig About 3,720 results (0.10 sec) (CH3 domain mutant pair)(heterodimeric Fc) About 6,270 results (0.12 sec) (CH3 domain mutant pair)(heterodimeric Fc)(S354)(Y349) About 31 results (0.13 sec) Your search - (CH3 domain mutant pair)(S354W) - did not match any articles. Your search - (CH3 domain mutant pair)(S354Y) - did not match any articles. | |