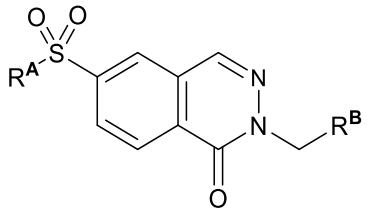
CLAIMS

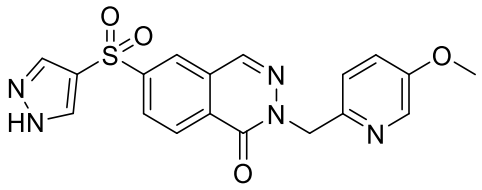
1. A compound of formula (Ia):



(Ia)

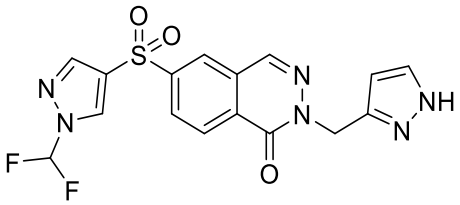
wherein:

(a) R^A is pyrazolyl and R^B is pyridinyl substituted by one OMe group to give 6-((1H-pyrazol-4-yl)sulfonyl)-2-((5-methoxypyridin-2-yl)methyl)phthalazin-1(2H)-one



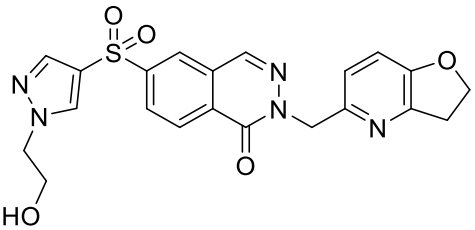
;

(b) R^A is pyrazolyl substituted by CHF_2 and R^B is pyrazolyl to give 2-((1H-pyrazol-3-yl)methyl)-6-((1-(difluoromethyl)-1H-pyrazol-4-yl)sulfonyl)phthalazin-1(2H)-one



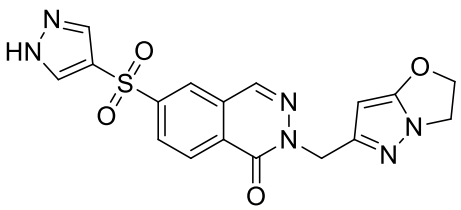
;

(c) R^A is pyrazolyl substituted by CH_2CH_2OH and R^B is dihydrofuro[3,2-b]pyridinyl to give 2-((2,3-dihydrofuro[3,2-b]pyridin-5-yl)methyl)-6-((1-(2-hydroxyethyl)-1H-pyrazol-4-yl)sulfonyl)phthalazin-1(2H)-one



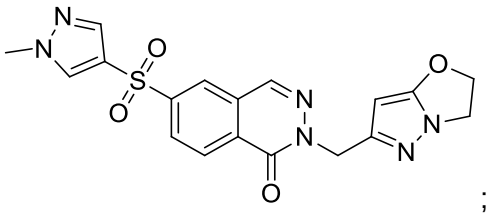
;

(d) R^A is pyrazolyl and R^B is 2,3-dihydropyrazolo[5,1-b]oxazolyl to give 6-((1H-pyrazol-4-yl)sulfonyl)-2-((2,3-dihydropyrazolo[5,1-b]oxazol-6-yl)methyl)phthalazin-1(2H)-one



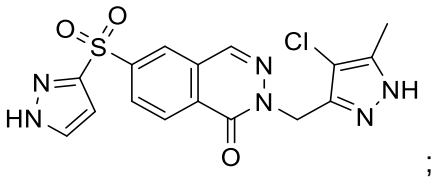
;

(e) R^A is pyrazolyl substituted by methyl and R^B is 2,3-dihydropyrazolo[5,1-b]oxazolyl to give 2-((2,3-dihydropyrazolo[5,1-b]oxazol-6-yl)methyl)-6-((1-methyl-1H-pyrazol-4-yl)sulfonyl)phthalazin-1(2H)-one



; or

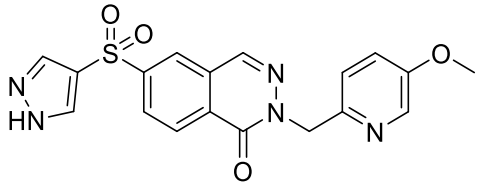
(f) R^A is pyrazolyl and R^B is pyrazolyl substituted by one Cl and one methyl to give 6-((1*H*-pyrazol-3-yl)sulfonyl)-2-((4-chloro-5-methyl-1*H*-pyrazol-3-yl)methyl)phthalazin-1(2*H*)-one



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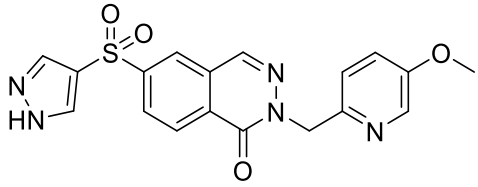
or a salt and/or solvate thereof.

2. The compound of formula (Ia) or a salt and/or solvate thereof according to claim 1 which is 6-((1H-pyrazol-4-yl)sulfonyl)-2-((5-methoxypyridin-2-yl)methyl)phthalazin-1(2H)-one



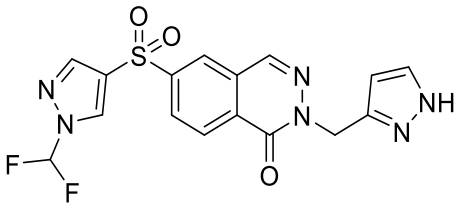
.

3. The compound of formula (Ia) or a salt and/or solvate thereof according to claim 1 which is a pharmaceutically acceptable salt of 6-((1H-pyrazol-4-yl)sulfonyl)-2-((5-methoxypyridin-2-yl)methyl)phthalazin-1(2H)-one



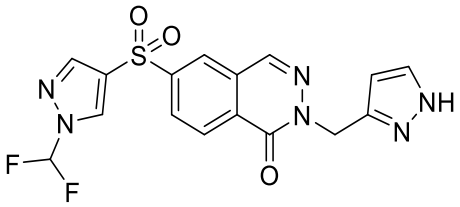
.

4. The compound of formula (Ia) or a salt and/or solvate thereof according to claim 1 which is 2-((1H-pyrazol-3-yl)methyl)-6-((1-(difluoromethyl)-1H-pyrazol-4-yl)sulfonyl)phthalazin-1(2H)-one



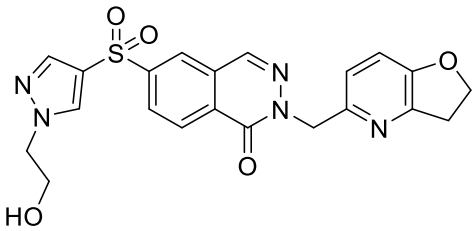
.

5. The compound of formula (Ia) or a salt and/or solvate thereof according to claim 1 which is a pharmaceutically acceptable salt of 2-((1H-pyrazol-3-yl)methyl)-6-((1-(difluoromethyl)-1H-pyrazol-4-yl)sulfonyl)phthalazin-1(2H)-one



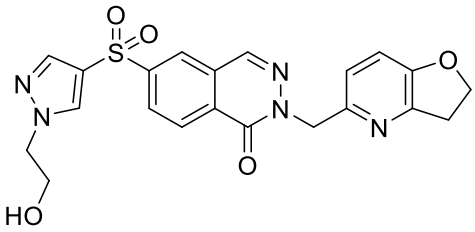
.

6. The compound of formula (Ia) or a salt and/or solvate thereof according to claim 1 which is 2-((2,3-dihydrofuro[3,2-b]pyridin-5-yl)methyl)-6-((1-(2-hydroxyethyl)-1H-pyrazol-4-yl)sulfonyl)phthalazin-1(2H)-one



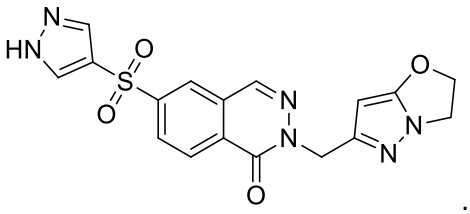
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7. The compound of formula (Ia) or a salt and/or solvate thereof according to claim 1 which is a pharmaceutically acceptable salt of 2-((2,3-dihydrofuro[3,2-b]pyridin-5-yl)methyl)-6-((1-(2-hydroxyethyl)-1H-pyrazol-4-yl)sulfonyl)phthalazin-1(2H)-one



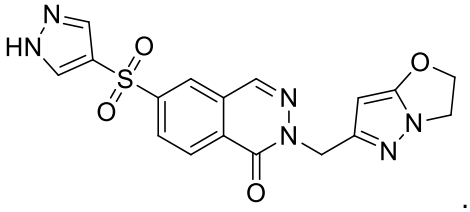
.

8. The compound of formula (Ia) or a salt and/or solvate thereof according to claim 1 which is 6-((1H-pyrazol-4-yl)sulfonyl)-2-((2,3-dihydropyrazolo[5,1-b]oxazol-6-yl)methyl)phthalazin-1(2H)-one



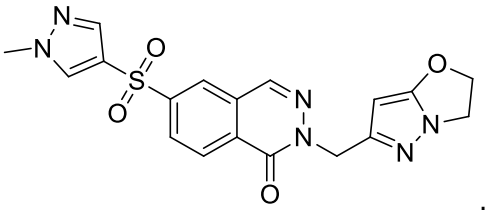
.

9. The compound of formula (Ia) or a salt and/or solvate thereof according to claim 1 which is a pharmaceutically acceptable salt of 6-((1H-pyrazol-4-yl)sulfonyl)-2-((2,3-dihydropyrazolo[5,1-b]oxazol-6-yl)methyl)phthalazin-1(2H)-one



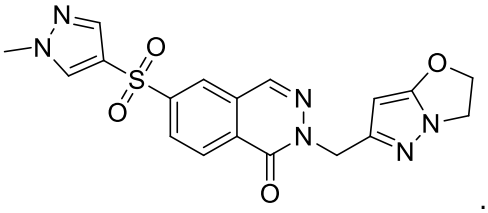
.

10. The compound of formula (Ia) or a salt and/or solvate thereof according to claim 1 which is 2-((2,3-dihydropyrazolo[5,1-b]oxazol-6-yl)methyl)-6-((1-methyl-1H-pyrazol-4-yl)sulfonyl)phthalazin-1(2H)-one



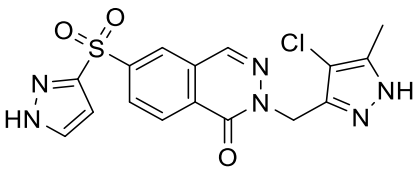
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11. The compound of formula (Ia) or a salt and/or solvate thereof according to claim 1 which is a pharmaceutically acceptable salt of 2-((2,3-dihydropyrazolo[5,1-b]oxazol-6-yl)methyl)-6-((1-methyl-1H-pyrazol-4-yl)sulfonyl)phthalazin-1(2H)-one



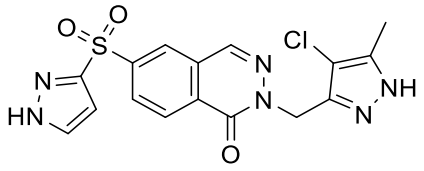
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12. The compound of formula (Ia) or a salt and/or solvate thereof according to claim 1 which is 6-((1*H*-pyrazol-3-yl)sulfonyl)-2-((4-chloro-5-methyl-1*H*-pyrazol-3-yl)methyl)phthalazin-1(2*H*)-one



.

13. The compound of formula (Ia) or a salt and/or solvate thereof according to claim 1 which is a pharmaceutically acceptable salt of 6-((1*H*-pyrazol-3-yl)sulfonyl)-2-((4-chloro-5-methyl-1*H*-pyrazol-3-yl)methyl)phthalazin-1(2*H*)-one



.

14. A pharmaceutical composition comprising the compound or a pharmaceutically acceptable salt and/or solvate thereof according to any one of claims 1 to 13, and one or more pharmaceutically acceptable diluents or carriers.

15. The compound or a pharmaceutically acceptable salt and/or solvate thereof according to any one of claims 1 to 13 or the pharmaceutical composition according to claim 14, for use as a medicament.

16. Use of the compound or a pharmaceutically acceptable salt and/or solvate thereof according to any one of claims 1 to 13 or the pharmaceutical composition according to claim 14 in the manufacture of a medicament for treating or preventing an inflammatory disease or a disease associated with an undesirable immune response.

17. The use according to claim 16, wherein the inflammatory disease or disease associated with an undesirable immune response is selected from the group consisting of Type 2 diabetes, hidradenitis suppurativa, bullous pemphigoid, pemphigus vulgaris, limited and diffuse scleroderma, Sjogren's syndrome, polymyositis, dermatomyositis, Behcet's disease, wound healing, cutaneous lupus erythematosus, graft-vs-host disease, rheumatoid arthritis, psoriatic arthritis, ankylosing spondylitis, systemic lupus erythematosus, multiple sclerosis, psoriasis, inflammatory bowel disease (including ulcerative colitis and Crohn's disease), atopic dermatitis, fibrosis including organ fibrosis (including liver, lung, kidney), uveitis, cryopyrin-associated periodic syndromes, Muckle-Wells syndrome, juvenile idiopathic arthritis, chronic obstructive pulmonary disease and asthma.

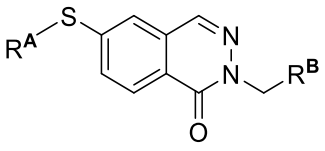
18. The use according to claim 16 or 17, for use in combination with a further therapeutic agent selected from the group consisting of a corticosteroid (glucocorticoid), retinoid (e.g. acitretin, isotretinoin, tazarotene), anthralin, vitamin D analogue (e.g. cacitriol, calcipotriol), calcineurin inhibitors (e.g. tacrolimus, pimecrolimus), phototherapy or photochemotherapy (e.g. psoralen ultraviolet irradiation, PUVA) or other form of ultraviolet light irradiation therapy,

ciclosporine, a thiopurine (e.g. azathioprine, 6-mercaptopurine), methotrexate, an anti-TNFα agent (e.g. infliximab, etanercept, adalimumab, certolizumab, golimumab or a biosimilar), phosphodiesterase-4 (PDE4) inhibitors (e.g. apremilast, crisaborole), anti-IL-17 agent (e.g. brodalumab, ixekizumab, secukinumab), anti-IL12/IL-23 agent (e.g. ustekinumab, briakinumab), anti-IL-23 agent (e.g. guselkumab, tildrakizumab), JAK (Janus Kinase) inhibitor (e.g. tofacitinib, ruxolitinib, baricitinib, filgotinib, upadacitinib), plasma exchange, intravenous immune globulin (IVIG), cyclophosphamide, anti-CD20 B cell depleting agent (e.g. rituximab, ocrelizumab, ofatumumab, obinutuzumab), anthracycline analogue (e.g. mitoxantrone), cladribine, sphingosine 1-phosphate receptor modulator or sphingosine analogue (e.g. fingolimod, siponimod, ozanimod, etrasimod), interferon beta preparation (including interferon beta 1b/1a), glatiramer, anti-CD3 therapy (e.g. OKT3), anti-CD52 targeting agent (e.g. alemtuzumab), leflunomide, teriflunomide, gold compound, laquinimod, potassium channel blocker (e.g. dalfampridine/4-aminopyridine), mycophenolic acid, mycophenolate mofetil, purine analogue (e.g. pentostatin), mTOR (mechanistic target of rapamycin) pathway inhibitor (e.g. sirolimus, everolimus), anti-thymocyte globulin (ATG), IL-2 receptor (CD25) inhibitor (e.g. basiliximab, daclizumab), anti-IL-6 receptor or anti-IL-6 agent (e.g. tocilizumab, siltuximab), Bruton's tyrosine kinase (BTK) inhibitor (e.g. ibrutinib), tyrosine kinase inhibitor (e.g. imatinib), ursodeoxycholic acid, hydroxychloroquine, chloroquine, B cell activating factor (BAFF, also known as BlyS, B lymphocyte stimulator) inhibitor (e.g. belimumab, blisibimod), other B cell targeted therapy including a fusion protein targeting both APRIL (A Proliferation-Inducing Ligand) and BlyS (e.g. atacicept), PI3K inhibitor including pan-inhibitor or one targeting the p110δ and/or p110γ containing isoforms (e.g. idelalisib, copanlisib, duvelisib), an interferon α receptor inhibitor (e.g. anifrolumab, sifalimumab), T cell co-stimulation blocker (e.g. abatacept, belatacept), thalidomide and its derivatives (e.g. lenalidomide), dapsone, clofazimine, a leukotriene antagonist (e.g. montelukast), theophylline, anti-IgE therapy (e.g. omalizumab), an anti-IL-5 agent (e.g. mepolizumab, reslizumab), a long-acting muscarinic agent (e.g. tiotropium, aclidinium, umeclidinium), a PDE4 inhibitor (e.g. roflumilast), riluzole, a free radical scavenger (e.g. edaravone), a proteasome inhibitor (e.g. bortezomib), a complement cascade inhibitor including one directed against C5 (e.g. eculizumab), immunoadsor, antithymocyte globulin, 5-aminosalicylates and their derivatives (e.g. sulfasalazine, balsalazide, mesalamine), an anti-integrin agent including one targeting α4β1 and/or α4β7 integrins (e.g. natalizumab, vedolizumab), an anti-CD11-α agent (e.g. efalizumab), a non-steroidal anti-inflammatory drug (NSAID) including a salicylate (e.g. aspirin), a propionic acid (e.g. ibuprofen, naproxen), an acetic acid (e.g. indomethacin, diclofenac, etodolac), an oxicam (e.g. meloxicam) a fenamate (e.g. mefenamic acid), a selective or relatively selective COX-2 inhibitor (e.g. celecoxib, etroxicoxib, valdecoxib and etodolac, meloxicam, nabumetone), colchicine, an IL-4 receptor inhibitor (e.g. dupilumab), topical/contact immunotherapy (e.g. diphenylcyclopropenone, squaric acid dibutyl ester), anti-IL-1 receptor therapy (e.g. anakinra), IL-1β inhibitor (e.g. canakinumab), IL-1 neutralising therapy (e.g. rilonacept), chlorambucil, a specific

antibiotic with immunomodulatory properties and/or ability to modulate NRF2 (e.g. tetracyclines including minocycline, clindamycin, macrolide antibiotics), anti-androgenic therapy (e.g. cyproterone, spironolactone, finasteride), pentoxifylline, ursodeoxycholic acid, obeticholic acid, fibrate, a cystic fibrosis transmembrane conductance regulator (CFTR) modulator, a VEGF (vascular endothelial growth factor) inhibitor (e.g. bevacizumab, ranibizumab, pegaptanib, aflibercept), pirfenidone or mizoribine.

19. A compound selected from the group consisting of:
2-((5-methoxypyridin-2-yl)methyl)-6-((1-(tetrahydro-2H-pyran-2-yl)-1H-pyrazol-4-yl)thio)phthalazin-1(2H)-one;
6-((1-(difluoromethyl)-1H-pyrazol-4-yl)thio)-2-((1-(tetrahydro-2H-pyran-2-yl)-1H-pyrazol-3-yl)methyl)phthalazin-1(2H)-one;
6-((1-(2-((tert-butyldimethylsilyl)oxy)ethyl)-1H-pyrazol-4-yl)thio)-2-((2,3-dihydrofuro[3,2-b]pyridin-5-yl)methyl)phthalazin-1(2H)-one;
2-((2,3-dihydropyrazolo[5,1-b]oxazol-6-yl)methyl)-6-((1-(tetrahydro-2H-pyran-2-yl)-1H-pyrazol-4-yl)thio)phthalazin-1(2H)-one;
2-((2,3-dihydropyrazolo[5,1-b]oxazol-6-yl)methyl)-6-((1-methyl-1H-pyrazol-4-yl)thio)phthalazin-1(2H)-one; and
2-((4-chloro-5-methyl-1*H*-pyrazol-3-yl)methyl)-6-((1-(tetrahydro-2*H*-pyran-2-yl)-1*H*-pyrazol-3-yl)sulfonyl)phthalazin-1(2*H*)-one;
or a salt thereof.

20. A process for preparing a compound of formula (Ia) as described in any one of claims 1 to 13, or a salt, such as a pharmaceutically acceptable salt and/or solvate thereof, which comprises oxidising a compound of formula (IIa):



(IIa)

or a salt and/or solvate thereof;
using an oxidising agent such as Oxone;
wherein R^A and R^B are defined in any one of claims 1 to 13.