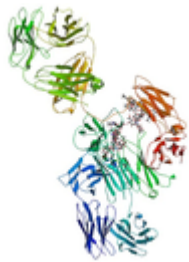




ID	Pharmacology	Interactions	References	Trials	Economics	Properties	Taxonomy
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Targets (12) [Biointeractions \(1\) \(/drugs/DB00051/biointeractions\)](/drugs/DB00051/biointeractions)


Identification

Name	Adalimumab
Accession Number	DB00051 (BTD00049, BIOD00049)
Type	Biotech
Groups	Approved
Description	Adalimumab is a human monoclonal antibody against TNF-alpha. It is produced by recombinant DNA technology using a mammalian cell expression system. It consists of 1330 amino acids and has a molecular weight of approximately 148 kilodaltons.
Protein structure	 (//s3-us-west-2.amazonaws.com/drugbank/protein_structures/full/DB00051.png?1266600379)

Related Articles	
Protein chemical formula	$C_{6428}H_{9912}N_{1694}O_{1987}S_{46}$
Protein average weight	144190.3 Da
Sequences	<div> <p>> Light chain: DIQMTQSPSSLSASVGDRTITCRASQGIRNYLAWYQQKPGKAPKLLIYAASLQSGVPS RFSGSGSGTDFTLTISSLQPEDVATYYCQRYNRAPYTFGGGTKVEIKRTVAAPSVFIFPP SDEQLKSGTASVVCLLNNFYPREAKVQWKVDNALQSGNSQESVTEQDSKDSSTLSSTLT LSKADYEKHKVYACEVTHQGLSSPVTKSFNRGEC</p> </div> <div> <p>> Heavy chain: EVQLVESGGGLVQPGRSLRLSCAASGFTFDDYAMHWVRQAPGKLEWVSATWNSGHIDY ADSVGRFTISRDAKNSLYLQMNSLRAEDTAVYYCAKVSYLSTASSLDYWGQGLVTVS SASTKGPSVFPLAPSSKSTSGGTAALGCLVKDYFPEPVTVSWNSGALTSGVHTFPAVLQS SGLYSLSVWTVPSSSLGTQTYICNVNHKPSNTKVDKKEPKSC</p> </div> <div> <p>Download FASTA Format (/drugs/DB00051/polypeptide_sequences.fasta)</p> </div>
Synonyms	Not Available
External IDs 	Not Available
Product Ingredients 	Not Available

Approved Prescription Products	Show <input type="text" value="10"/> entries Search									
	Name ↑↓	Dosage ↑↓	Strength ↑↓	Route ↑↓	Labeller ↑↓	Marketing Start ↑↓	Marketing End ↑↓	↑↓	↑↓	
	Humira	Kit			Abbvie	2002-12-31	Not applicable			
	Humira	Injection, solution	40 mg	Subcutaneous	Abbvie	2003-09-08	Not applicable			
	Humira	Injection, solution	40 mg	Subcutaneous	Abbvie	2003-09-08	Not applicable			
	Humira	Kit			Abbvie	2016-03-09	Not applicable			
	Humira	Injection, solution	40 mg	Subcutaneous	Abbvie	2003-09-08	Not applicable			
	Humira	Solution	40 mg	Subcutaneous	Abbvie	2016-11-14	Not applicable			
	Humira	Kit			Abbvie	2017-04-21	Not applicable			
	Humira	Injection, solution	40 mg	Subcutaneous	Abbvie	2003-09-08	Not applicable			
	Humira	Kit			Abbvie	2002-12-31	Not applicable			
	Humira	Injection, solution	40 mg	Subcutaneous	Abbvie	2003-09-08	Not applicable			
Showing 1 to 10 of 35 entries							Previous <input type="text" value="1"/> <input type="text" value="2"/> <input type="text" value="3"/> <input type="text" value="4"/> Next			
Approved Generic Prescription Products	Not Available									
Approved Over the Counter Products	Not Available									
Unapproved/Other Products ⓘ	Not Available									
International Brands	Show <input type="text" value="10"/> entries Search									
	Name ↑↓	Company ↑↓								
Humira Pen	Abbott Laboratories									
Showing 1 to 1 of 1 entries							Previous <input type="text" value="1"/> Next			

Brand mixtures	Not Available
Categories	<ul style="list-style-type: none"> • Amino Acids, Peptides, and Proteins (/categories/DBCAT000021) • Anti-Inflammatory Agents (/categories/DBCAT000046) • Antibodies (/categories/DBCAT000016) • Antibodies, Monoclonal (/categories/DBCAT000015) • Antibodies, Monoclonal, Humanized (/categories/DBCAT000014) • Antineoplastic and Immunomodulating Agents (/categories/DBCAT002086) • Antirheumatic Agents (/categories/DBCAT000045) • Biologics for Rheumatoid Arthritis Treatment (/categories/DBCAT003020) • Blood Proteins (/categories/DBCAT000019) • Globulins (/categories/DBCAT000022) • Immunoglobulins (/categories/DBCAT000017) • Immunoproteins (/categories/DBCAT000023) • Immunosuppressive Agents (/categories/DBCAT000047) • Proteins (/categories/DBCAT000020) • Serum Globulins (/categories/DBCAT000018) • Tumor Necrosis Factor Alpha (TNF-α) Inhibitors (/categories/DBCAT002087)
UNII	FYS6T7F842  (http://fdasis.nlm.nih.gov/srs/srsdirect.jsp?regno=FYS6T7F842)
CAS number	331731-18-1
Pharmacology	
Indication	For treatment of rheumatoid arthritis, psoriatic arthritis, ankylosing spondylitis, and Crohn's disease.

Structured Indications 	<ul style="list-style-type: none"> • Ankylosing Spondylitis (AS) (/indications/DBCOND0046486) • Crohn's Disease (CD) (/indications/DBCOND0052193) • Psoriatic arthritis aggravated (/indications/DBCOND0025138) • Pyoderma Gangrenosum (/indications/DBCOND0005724) • Severe Plaque psoriasis (/indications/DBCOND0025583) • Severe Ulcerative Colitis (/indications/DBCOND0033634) • Uveitis (/indications/DBCOND0009937) • Moderate Hidradenitis Suppurativa (/indications/DBCOND0020392) • Moderate Plaque psoriasis (/indications/DBCOND0020390) • Moderate Rheumatoid arthritis (/indications/DBCOND0020318) • Moderate Ulcerative colitis (/indications/DBCOND0020388) • Severe Hidradenitis Suppurativa (/indications/DBCOND0020391) • Severe Rheumatoid arthritis (/indications/DBCOND0020317) 																																																	
Pharmacodynamics	<p>Used in the treatment of immune system mediated diseases, adalimumab binds specifically to TNF-alpha and blocks its general cytokine effects, thereby reducing TNF-induced inflammation and halting tissue destruction.</p>																																																	
Mechanism of action	<p>Adalimumab binds to TNF-alpha and blocks its interaction with the p55 and p75 cell surface TNF receptors. Adalimumab also lyses surface TNF expressing cells in vitro in the presence of complement.</p> <table border="1"> <thead> <tr> <th>Target</th> <th>Kind</th> <th>Pharmacological action</th> <th>Actions</th> <th>Organism</th> <th>UniProt ID</th> <th></th> </tr> </thead> <tbody> <tr> <td>Tumor necrosis factor</td> <td>Protein</td> <td><input type="checkbox"/> yes</td> <td><input type="checkbox"/> antibody</td> <td>Human</td> <td>P01375 🔗 (http://www.uniprot.org/uniprot/P01375)</td> <td><input type="button" value="details"/></td> </tr> <tr> <td>Low affinity immunoglobulin gamma Fc region receptor III-B</td> <td>Protein</td> <td><input type="checkbox"/> unknown</td> <td>Not Available</td> <td>Human</td> <td>O75015 🔗 (http://www.uniprot.org/uniprot/O75015)</td> <td><input type="button" value="details"/></td> </tr> <tr> <td>Complement C1r subcomponent</td> <td>Protein</td> <td><input type="checkbox"/> unknown</td> <td>Not Available</td> <td>Human</td> <td>P00736 🔗 (http://www.uniprot.org/uniprot/P00736)</td> <td><input type="button" value="details"/></td> </tr> <tr> <td>Complement C1q subcomponent subunit A</td> <td>Protein</td> <td><input type="checkbox"/> unknown</td> <td>Not Available</td> <td>Human</td> <td>P02745 🔗 (http://www.uniprot.org/uniprot/P02745)</td> <td><input type="button" value="details"/></td> </tr> <tr> <td>Complement C1q subcomponent subunit B</td> <td>Protein</td> <td><input type="checkbox"/> unknown</td> <td>Not Available</td> <td>Human</td> <td>P02746 🔗 (http://www.uniprot.org/uniprot/P02746)</td> <td><input type="button" value="details"/></td> </tr> <tr> <td>Complement C1q subcomponent subunit C</td> <td>Protein</td> <td><input type="checkbox"/> unknown</td> <td>Not Available</td> <td>Human</td> <td>P02747 🔗 (http://www.uniprot.org/uniprot/P02747)</td> <td><input type="button" value="details"/></td> </tr> </tbody> </table>	Target	Kind	Pharmacological action	Actions	Organism	UniProt ID		Tumor necrosis factor	Protein	<input type="checkbox"/> yes	<input type="checkbox"/> antibody	Human	P01375 🔗 (http://www.uniprot.org/uniprot/P01375)	<input type="button" value="details"/>	Low affinity immunoglobulin gamma Fc region receptor III-B	Protein	<input type="checkbox"/> unknown	Not Available	Human	O75015 🔗 (http://www.uniprot.org/uniprot/O75015)	<input type="button" value="details"/>	Complement C1r subcomponent	Protein	<input type="checkbox"/> unknown	Not Available	Human	P00736 🔗 (http://www.uniprot.org/uniprot/P00736)	<input type="button" value="details"/>	Complement C1q subcomponent subunit A	Protein	<input type="checkbox"/> unknown	Not Available	Human	P02745 🔗 (http://www.uniprot.org/uniprot/P02745)	<input type="button" value="details"/>	Complement C1q subcomponent subunit B	Protein	<input type="checkbox"/> unknown	Not Available	Human	P02746 🔗 (http://www.uniprot.org/uniprot/P02746)	<input type="button" value="details"/>	Complement C1q subcomponent subunit C	Protein	<input type="checkbox"/> unknown	Not Available	Human	P02747 🔗 (http://www.uniprot.org/uniprot/P02747)	<input type="button" value="details"/>
Target	Kind	Pharmacological action	Actions	Organism	UniProt ID																																													
Tumor necrosis factor	Protein	<input type="checkbox"/> yes	<input type="checkbox"/> antibody	Human	P01375 🔗 (http://www.uniprot.org/uniprot/P01375)	<input type="button" value="details"/>																																												
Low affinity immunoglobulin gamma Fc region receptor III-B	Protein	<input type="checkbox"/> unknown	Not Available	Human	O75015 🔗 (http://www.uniprot.org/uniprot/O75015)	<input type="button" value="details"/>																																												
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Complement C1q subcomponent subunit B	Protein	<input type="checkbox"/> unknown	Not Available	Human	P02746 🔗 (http://www.uniprot.org/uniprot/P02746)	<input type="button" value="details"/>																																												
Complement C1q subcomponent subunit C	Protein	<input type="checkbox"/> unknown	Not Available	Human	P02747 🔗 (http://www.uniprot.org/uniprot/P02747)	<input type="button" value="details"/>																																												

	Target	Kind	Pharmacological action	Actions	Organism	UniProt ID	
	Low affinity immunoglobulin gamma Fc region receptor III-A	Protein	unknown	Not Available	Human	P08637 ↗ (http://www.uniprot.org/uniprot/P08637)	details
	Complement C1s subcomponent	Protein	unknown	Not Available	Human	P09871 ↗ (http://www.uniprot.org/uniprot/P09871)	details
	High affinity immunoglobulin gamma Fc receptor I	Protein	unknown	Not Available	Human	P12314 ↗ (http://www.uniprot.org/uniprot/P12314)	details
	Low affinity immunoglobulin gamma Fc region receptor II-a	Protein	unknown	Not Available	Human	P12318 ↗ (http://www.uniprot.org/uniprot/P12318)	details
	Low affinity immunoglobulin gamma Fc region receptor II-b	Protein	unknown	Not Available	Human	P31994 ↗ (http://www.uniprot.org/uniprot/P31994)	details
	Low affinity immunoglobulin gamma Fc region receptor II-c	Protein	unknown	Not Available	Human	P31995 ↗ (http://www.uniprot.org/uniprot/P31995)	details
Related Articles							
Absorption	Not Available						
Volume of distribution	Not Available						
Protein binding	Not Available						
Metabolism	Most likely removed by opsonization via the reticuloendothelial system.						
Route of elimination	Not Available						
Half life	10-20 days.						

Clearance	<ul style="list-style-type: none"> 12 mL/hr [RA patients with dose 0.25-10 mg/kg]
Toxicity	Not Available
Affected organisms	<ul style="list-style-type: none"> Humans and other mammals
Pathways	Not Available
Pharmacogenomic Effects/ADRs ⓘ	Not Available

Interactions

Drug Interactions ⓘShow entries

Drug	Interaction	Drug group
Abatacept (/drugs/DB01281)	The risk or severity of adverse effects can be increased when Adalimumab is combined with Abatacept.	Approved
Ambroxol acefyllinate (/drugs/DB13141)	The serum concentration of Ambroxol acefyllinate can be decreased when it is combined with Adalimumab.	Experimental
Aminophylline (/drugs/DB01223)	The serum concentration of Aminophylline can be decreased when it is combined with Adalimumab.	Approved
Anakinra (/drugs/DB00026)	The risk or severity of adverse effects can be increased when Adalimumab is combined with Anakinra.	Approved
BCG vaccine (/drugs/DB12768)	The therapeutic efficacy of Bcg can be decreased when used in combination with Adalimumab.	Investigational
Belimumab (/drugs/DB08879)	The risk or severity of adverse effects can be increased when Adalimumab is combined with Belimumab.	Approved
Canakinumab (/drugs/DB06168)	The risk or severity of adverse effects can be increased when Adalimumab is combined with Canakinumab.	Approved, Investigational
Certolizumab pegol (/drugs/DB08904)	Adalimumab may increase the immunosuppressive activities of Certolizumab pegol.	Approved
Cyclosporine (/drugs/DB00091)	The serum concentration of Cyclosporine can be decreased when it is combined with Adalimumab.	Approved, Investigational, Vet Approved
Denosumab (/drugs/DB06643)	The risk or severity of adverse effects can be increased when Denosumab is combined with Adalimumab.	Approved

Showing 1 to 10 of 38 entries

Food Interactions

Not Available

References

Synthesis Reference	Not Available	
General References	<ol style="list-style-type: none"> 1. Link [Link (http://www.freepatentsonline.com/6090382.html)] 2. Link [Link (http://www.rcsb.org/pdb/download/downloadFile.do?fileFormat=FASTA&compression=NO&structureId=1IGT)] 	
External Links	Resource	Link
	UniProt	P01857  (http://www.uniprot.org/uniprot/P01857)
	Genbank	J00228  (http://www.ncbi.nlm.nih.gov/entrez/viewer.fcgi?val=J00228)
	PharmGKB	PA10004  (http://www.pharmgkb.org/drug/PA10004)
	Drug Product Database	13356  (http://webprod5.hc-sc.gc.ca/dpd-bdpp/info.do?code=13356&lang=eng)
	RxList	http://www.rxlist.com/cgi/generic3/humira.htm  (http://www.rxlist.com/cgi/generic3/humira.htm)
	Drugs.com	http://www.drugs.com/cdi/adalimumab.html  (http://www.drugs.com/cdi/adalimumab.html)
	Wikipedia	Adalimumab  (http://en.wikipedia.org/wiki/Adalimumab)
ATC Codes	L04AB04 – Adalimumab (/atc/L04AB04) L04AB – Tumor necrosis factor alpha (TNF- α) inhibitors (/atc/L04AB) L04A – IMMUNOSUPPRESSANTS (/atc/L04A) L04 – IMMUNOSUPPRESSANTS (/atc/L04) L – ANTINEOPLASTIC AND IMMUNOMODULATING AGENTS (/atc/L)	
AHFS Codes	<ul style="list-style-type: none"> • 92:00.00 	
PDB Entries	<ul style="list-style-type: none"> • 1IGT  (http://www.rcsb.org/pdb/explore.do?structureId=1IGT) 	
FDA label	Not Available	
MSDS	Not Available	
Clinical Trials		

Clinical Trials ⓘ

Show entries

Phase ↑↓	Status ↑↓	Purpose ↑↓	Conditions ↑↓	Count ↑↓
0	Completed	Basic Science	Innate Immunity (/indications/DBCOND0053258)	1 (/drugs/DB00051/clinical_trials?conditions=DBCOND0053258&phase=0&purpose=basic_science&status=completed)
1	Completed	Not Available	Healthy Volunteers (/indications/DBCOND0066957)	1 (/drugs/DB00051/clinical_trials?conditions=DBCOND0066957&phase=1&status=completed)
1	Completed	Basic Science	Healthy Volunteers (/indications/DBCOND0066957)	1 (/drugs/DB00051/clinical_trials?conditions=DBCOND0066957&phase=1&purpose=basic_science&status=completed)
1	Completed	Health Services Research	Healthy Volunteers (/indications/DBCOND0066957)	1 (/drugs/DB00051/clinical_trials?conditions=DBCOND0066957&phase=1&purpose=health_services_research&status=completed)
1	Completed	Other	Healthy Volunteers (/indications/DBCOND0066957)	1 (/drugs/DB00051/clinical_trials?conditions=DBCOND0066957&phase=1&purpose=other&status=completed)
1	Completed	Treatment	Glomerulosclerosis, Focal Segmental (/indications/DBCOND0001365)	1 (/drugs/DB00051/clinical_trials?conditions=DBCOND0001365&phase=1&purpose=treatment&status=completed)
1	Completed	Treatment	Healthy Volunteers (/indications/DBCOND0066957)	2 (/drugs/DB00051/clinical_trials?conditions=DBCOND0066957&phase=1&purpose=treatment&status=completed)
1	Completed	Treatment	Psoriasis (/indications/DBCOND0013339)	1 (/drugs/DB00051/clinical_trials?conditions=DBCOND0013339&phase=1&purpose=treatment&status=completed)
1	Completed	Treatment	Rheumatoid Arthritis (/indications/DBCOND0027961)	1 (/drugs/DB00051/clinical_trials?conditions=DBCOND0027961&phase=1&purpose=treatment&status=completed)
1	Completed	Treatment	Ulcerative Colitis (UC) (/indications/DBCOND0052192)	1 (/drugs/DB00051/clinical_trials?conditions=DBCOND0052192&phase=1&purpose=treatment&status=completed)

Showing 1 to 10 of 181 entries

Pharmacoeconomics

Manufacturers

Not Available

Packagers

- Abbott Laboratories Ltd. (<http://www.abbott.com>)
- Vetter Pharma Fertigung GmbH and Co. KG (<http://www.vetter-pharma.com>)

Dosage forms

Show entries

Form	Route	Strength
Injection, solution	Subcutaneous	40 mg
Injection, solution	Subcutaneous	40 mg/.8mL
Kit		
Solution	Subcutaneous	40 mg
Solution	Subcutaneous	80 mg

Showing 1 to 5 of 5 entries

Previous Next

Prices


Show entries

Unit description	Cost	Unit
Humira (1 Box = Two 40 mg/0.8ml Syringes) Box	1995.1USD	box
Humira 2 20 mg/0.4ml Kit 1 Box = Two 20 mg/0.4ml Syringes	1995.1USD	box
Humira Pen 2 40 mg/0.8ml Kit (1 Box = 1 Kit Containing Two 40 mg/0.8ml Pens)	1995.1USD	box
Humira 20 mg/0.4 ml syringe	959.19USD	syringe
Humira 40 mg/0.8 ml pen	959.19USD	pen
Humira crohn's starter pack	959.19USD	each
Humira psoriasis starter pack	959.19USD	each

Showing 1 to 7 of 7 entries

Previous Next

 DrugBank does not sell nor buy drugs. Pricing information is supplied for informational purposes only.

Patents		Show <input type="text" value="10"/> entries		Search	
Patent Number	Pediatric Extension	Approved	Expires (estimated)		
CA2243459 🔗 (https://patents.google.com/patent/CA2243459)	<input type="text" value="No"/>	2002-09-17	2017-02-10		
Showing 1 to 1 of 1 entries				<input type="button" value="Previous"/> <input type="text" value="1"/> <input type="button" value="Next"/>	
Properties					
State	Liquid				
Experimental Properties	Property	Value	Source		
	hydrophobicity	-0.441	Not Available		
	isoelectric point	8.25	Not Available		
Taxonomy					
Description	Not Available				
Kingdom	Organic Compounds				
Super Class	Organic Acids				
Class	Carboxylic Acids and Derivatives				
Sub Class	Amino Acids, Peptides, and Analogues				
Direct Parent	Peptides				
Alternative Parents	Not Available				
Substituents	Not Available				
Molecular Framework	Not Available				
External Descriptors	Not Available				

Targets

1. Tumor necrosis factor (/biodb/polypeptides/P01375)[Details \(/biodb/polypeptides/P01375\)](#)

Kind Protein
Organism Human
Pharmacological action yes
Actions antibody

General Function: Tumor necrosis factor receptor binding

Specific Function: Cytokine that binds to TNFRSF1A/TNFR1 and TNFRSF1B/TNFR. It is mainly secreted by macrophages and can induce cell death of certain tumor cell lines. It is a potent pyrogen causing fever by direct action or by stimulation of interleukin-1 secretion and is implicated in the induction of cachexia. Under certain conditions it can stimulate cell proliferation and induce cell differentiation. Impairs ...

Gene Name: TNF

Uniprot ID: P01375 [🔗](http://www.uniprot.org/uniprot/P01375) (http://www.uniprot.org/uniprot/P01375)

Uniprot Name: Tumor necrosis factor

Molecular Weight: 25644.15 Da

References

1. Lorenz HM: Technology evaluation: adalimumab, Abbott laboratories. *Curr Opin Mol Ther.* 2002 Apr;4(2):185-90. [PubMed:12044041 [🔗](http://www.ncbi.nlm.nih.gov/pubmed/12044041) (http://www.ncbi.nlm.nih.gov/pubmed/12044041)]
2. Flendrie M, Creemers MC, Welsing PM, den Broeder AA, van Riel PL: Survival during treatment with tumour necrosis factor blocking agents in rheumatoid arthritis. *Ann Rheum Dis.* 2003 Nov;62 Suppl 2:ii30-3. [PubMed:14532145 [🔗](http://www.ncbi.nlm.nih.gov/pubmed/14532145) (http://www.ncbi.nlm.nih.gov/pubmed/14532145)]
3. Aguilon JC, Contreras J, Dotte A, Cruzat A, Catalan D, Salazar L, Molina MC, Guerrero J, Lopez M, Soto L, Salazar-Onfray F, Cuchacovich M: [New immunological weapons for medicine in the 21st Century: biological therapy based on the use of the latest generation monoclonal antibodies]. *Rev Med Chil.* 2003 Dec;131(12):1445-53. [PubMed:15022409 [🔗](http://www.ncbi.nlm.nih.gov/pubmed/15022409) (http://www.ncbi.nlm.nih.gov/pubmed/15022409)]
4. Bang LM, Keating GM: Adalimumab: a review of its use in rheumatoid arthritis. *BioDrugs.* 2004;18(2):121-39. [PubMed:15046527 [🔗](http://www.ncbi.nlm.nih.gov/pubmed/15046527) (http://www.ncbi.nlm.nih.gov/pubmed/15046527)]
5. Klinkhoff A: Biological agents for rheumatoid arthritis: targeting both physical function and structural damage. *Drugs.* 2004;64(12):1267-83. [PubMed:15200343 [🔗](http://www.ncbi.nlm.nih.gov/pubmed/15200343) (http://www.ncbi.nlm.nih.gov/pubmed/15200343)]
6. Chen X, Ji ZL, Chen YZ: TTD: Therapeutic Target Database. *Nucleic Acids Res.* 2002 Jan 1;30(1):412-5. [PubMed:11752352 [🔗](http://www.ncbi.nlm.nih.gov/pubmed/11752352) (http://www.ncbi.nlm.nih.gov/pubmed/11752352)]

2. Low affinity immunoglobulin gamma Fc region receptor III-B (/biodb/polypeptides/O75015)[Details \(/biodb/polypeptides/O75015\)](#)

Kind Protein
Organism Human
Pharmacological action unknown

General Function: Not Available
Specific Function: Receptor for the Fc region of immunoglobulins gamma. Low affinity receptor. Binds complexed or aggregated IgG and also monomeric IgG. Contrary to III-A, is not capable to mediate antibody-dependent cytotoxicity and phagocytosis. May serve as a trap for immune complexes in the peripheral circulation which does not activate neutrophils.

Gene Name: FCGR3B
Uniprot ID: O75015 [🔗](http://www.uniprot.org/uniprot/O75015) (http://www.uniprot.org/uniprot/O75015)
Uniprot Name: Low affinity immunoglobulin gamma Fc region receptor III-B
Molecular Weight: 26215.64 Da

References

- Overington JP, Al-Lazikani B, Hopkins AL: How many drug targets are there? Nat Rev Drug Discov. 2006 Dec;5(12):993-6. [PubMed:17139284 [🔗](http://www.ncbi.nlm.nih.gov/pubmed/17139284) (http://www.ncbi.nlm.nih.gov/pubmed/17139284)]
- Imming P, Sinning C, Meyer A: Drugs, their targets and the nature and number of drug targets. Nat Rev Drug Discov. 2006 Oct;5(10):821-34. [PubMed:17016423 [🔗](http://www.ncbi.nlm.nih.gov/pubmed/17016423) (http://www.ncbi.nlm.nih.gov/pubmed/17016423)]

3. Complement C1r subcomponent (/biodb/polypeptides/P00736)

[Details \(/biodb/polypeptides/P00736\)](/biodb/polypeptides/P00736)

Kind Protein
Organism Human
Pharmacological action unknown

General Function: Serine-type peptidase activity
Specific Function: C1r B chain is a serine protease that combines with C1q and C1s to form C1, the first component of the classical pathway of the complement system.
Gene Name: C1R
Uniprot ID: P00736 [🔗](http://www.uniprot.org/uniprot/P00736) (http://www.uniprot.org/uniprot/P00736)
Uniprot Name: Complement C1r subcomponent
Molecular Weight: 80118.04 Da

References

- Overington JP, Al-Lazikani B, Hopkins AL: How many drug targets are there? Nat Rev Drug Discov. 2006 Dec;5(12):993-6. [PubMed:17139284 [🔗](http://www.ncbi.nlm.nih.gov/pubmed/17139284) (http://www.ncbi.nlm.nih.gov/pubmed/17139284)]
- Imming P, Sinning C, Meyer A: Drugs, their targets and the nature and number of drug targets. Nat Rev Drug Discov. 2006 Oct;5(10):821-34. [PubMed:17016423 [🔗](http://www.ncbi.nlm.nih.gov/pubmed/17016423) (http://www.ncbi.nlm.nih.gov/pubmed/17016423)]

4. Complement C1q subcomponent subunit A (/biodb/polypeptides/P02745)

[Details \(/biodb/polypeptides/P02745\)](#)

Kind Protein
Organism Human
Pharmacological action unknown

General Function: Not Available

Specific Function: C1q associates with the proenzymes C1r and C1s to yield C1, the first component of the serum complement system. The collagen-like regions of C1q interact with the Ca(2+)-dependent C1r(2)C1s(2) proenzyme complex, and efficient activation of C1 takes place on interaction of the globular heads of C1q with the Fc regions of IgG or IgM antibody present in immune complexes.

Gene Name: C1QA

Uniprot ID: P02745 [Ⓞ](http://www.uniprot.org/uniprot/P02745) (http://www.uniprot.org/uniprot/P02745)

Uniprot Name: Complement C1q subcomponent subunit A

Molecular Weight: 26016.47 Da

References

1. Overington JP, Al-Lazikani B, Hopkins AL: How many drug targets are there? Nat Rev Drug Discov. 2006 Dec;5(12):993-6. [PubMed:17139284 [Ⓞ](http://www.ncbi.nlm.nih.gov/pubmed/17139284) (http://www.ncbi.nlm.nih.gov/pubmed/17139284)]
2. Imming P, Sinning C, Meyer A: Drugs, their targets and the nature and number of drug targets. Nat Rev Drug Discov. 2006 Oct;5(10):821-34. [PubMed:17016423 [Ⓞ](http://www.ncbi.nlm.nih.gov/pubmed/17016423) (http://www.ncbi.nlm.nih.gov/pubmed/17016423)]

5. Complement C1q subcomponent subunit B (/biodb/polypeptides/P02746)

[Details \(/biodb/polypeptides/P02746\)](#)

Kind Protein
Organism Human
Pharmacological action unknown

General Function: Not Available

Specific Function: C1q associates with the proenzymes C1r and C1s to yield C1, the first component of the serum complement system. The collagen-like regions of C1q interact with the Ca(2+)-dependent C1r(2)C1s(2) proenzyme complex, and efficient activation of C1 takes place on interaction of the globular heads of C1q with the Fc regions of IgG or IgM antibody present in immune complexes.

Gene Name: C1QB

Uniprot ID: P02746 [Ⓞ](http://www.uniprot.org/uniprot/P02746) (http://www.uniprot.org/uniprot/P02746)

Uniprot Name: Complement C1q subcomponent subunit B

Molecular Weight: 26721.62 Da**References**

- Overington JP, Al-Lazikani B, Hopkins AL: How many drug targets are there? Nat Rev Drug Discov. 2006 Dec;5(12):993-6. [PubMed:17139284 [↗](http://www.ncbi.nlm.nih.gov/pubmed/17139284) (http://www.ncbi.nlm.nih.gov/pubmed/17139284)]
- Imming P, Sinning C, Meyer A: Drugs, their targets and the nature and number of drug targets. Nat Rev Drug Discov. 2006 Oct;5(10):821-34. [PubMed:17016423 [↗](http://www.ncbi.nlm.nih.gov/pubmed/17016423) (http://www.ncbi.nlm.nih.gov/pubmed/17016423)]

6. Complement C1q subcomponent subunit C (/biodb/polypeptides/P02747)[Details \(/biodb/polypeptides/P02747\)](/biodb/polypeptides/P02747)

Kind Protein
Organism Human
Pharmacological action unknown

General Function: Not Available**Specific Function:** C1q associates with the proenzymes C1r and C1s to yield C1, the first component of the serum complement system. The collagen-like regions of C1q interact with the Ca(2+)-dependent C1r(2)C1s(2) proenzyme complex, and efficient activation of C1 takes place on interaction of the globular heads of C1q with the Fc regions of IgG or IgM antibody present in immune complexes.**Gene Name:** C1QC**Uniprot ID:** P02747 [↗](http://www.uniprot.org/uniprot/P02747) (http://www.uniprot.org/uniprot/P02747)**Uniprot Name:** Complement C1q subcomponent subunit C**Molecular Weight:** 25773.56 Da**References**

- Overington JP, Al-Lazikani B, Hopkins AL: How many drug targets are there? Nat Rev Drug Discov. 2006 Dec;5(12):993-6. [PubMed:17139284 [↗](http://www.ncbi.nlm.nih.gov/pubmed/17139284) (http://www.ncbi.nlm.nih.gov/pubmed/17139284)]
- Imming P, Sinning C, Meyer A: Drugs, their targets and the nature and number of drug targets. Nat Rev Drug Discov. 2006 Oct;5(10):821-34. [PubMed:17016423 [↗](http://www.ncbi.nlm.nih.gov/pubmed/17016423) (http://www.ncbi.nlm.nih.gov/pubmed/17016423)]

7. Low affinity immunoglobulin gamma Fc region receptor III-A (/biodb/polypeptides/P08637)[Details \(/biodb/polypeptides/P08637\)](/biodb/polypeptides/P08637)

Kind Protein
Organism Human

Pharmacological action unknown

General Function: Not Available

Specific Function: Receptor for the Fc region of IgG. Binds complexed or aggregated IgG and also monomeric IgG. Mediates antibody-dependent cellular cytotoxicity (ADCC) and other antibody-dependent responses, such as phagocytosis.

Gene Name: FCGR3A

Uniprot ID: P08637 [Ⓞ](http://www.uniprot.org/uniprot/P08637) (http://www.uniprot.org/uniprot/P08637)

Uniprot Name: Low affinity immunoglobulin gamma Fc region receptor III-A

Molecular Weight: 29088.895 Da

References

- Overington JP, Al-Lazikani B, Hopkins AL: How many drug targets are there? Nat Rev Drug Discov. 2006 Dec;5(12):993-6. [PubMed:17139284 [Ⓞ](http://www.ncbi.nlm.nih.gov/pubmed/17139284) (http://www.ncbi.nlm.nih.gov/pubmed/17139284)]
- Imming P, Sinning C, Meyer A: Drugs, their targets and the nature and number of drug targets. Nat Rev Drug Discov. 2006 Oct;5(10):821-34. [PubMed:17016423 [Ⓞ](http://www.ncbi.nlm.nih.gov/pubmed/17016423) (http://www.ncbi.nlm.nih.gov/pubmed/17016423)]

8. Complement C1s subcomponent (/biodb/polypeptides/P09871)

[Ⓞ Details \(/biodb/polypeptides/P09871\)](/biodb/polypeptides/P09871)

Kind Protein

Organism Human

Pharmacological action unknown

General Function: Serine-type endopeptidase activity

Specific Function: C1s B chain is a serine protease that combines with C1q and C1r to form C1, the first component of the classical pathway of the complement system. C1r activates C1s so that it can, in turn, activate C2 and C4.

Gene Name: C1S

Uniprot ID: P09871 [Ⓞ](http://www.uniprot.org/uniprot/P09871) (http://www.uniprot.org/uniprot/P09871)

Uniprot Name: Complement C1s subcomponent

Molecular Weight: 76683.905 Da

References

- Overington JP, Al-Lazikani B, Hopkins AL: How many drug targets are there? Nat Rev Drug Discov. 2006 Dec;5(12):993-6. [PubMed:17139284 [Ⓞ](http://www.ncbi.nlm.nih.gov/pubmed/17139284) (http://www.ncbi.nlm.nih.gov/pubmed/17139284)]
- Imming P, Sinning C, Meyer A: Drugs, their targets and the nature and number of drug targets. Nat Rev Drug Discov. 2006 Oct;5(10):821-34. [PubMed:17016423 [Ⓞ](http://www.ncbi.nlm.nih.gov/pubmed/17016423) (http://www.ncbi.nlm.nih.gov/pubmed/17016423)]

9. High affinity immunoglobulin gamma Fc receptor I (/biodb/polypeptides/P12314)[Details \(/biodb/polypeptides/P12314\)](#)

Kind Protein
Organism Human
Pharmacological action unknown

General Function: Receptor signaling protein activity
Specific Function: High affinity receptor for the Fc region of immunoglobulins gamma. Functions in both innate and adaptive immune responses.
Gene Name: FCGR1A
Uniprot ID: P12314 [Ⓞ](http://www.uniprot.org/uniprot/P12314) (http://www.uniprot.org/uniprot/P12314)
Uniprot Name: High affinity immunoglobulin gamma Fc receptor I
Molecular Weight: 42631.525 Da

References

1. Overington JP, Al-Lazikani B, Hopkins AL: How many drug targets are there? Nat Rev Drug Discov. 2006 Dec;5(12):993-6. [PubMed:17139284 [Ⓞ](http://www.ncbi.nlm.nih.gov/pubmed/17139284) (http://www.ncbi.nlm.nih.gov/pubmed/17139284)]
2. Imming P, Sinning C, Meyer A: Drugs, their targets and the nature and number of drug targets. Nat Rev Drug Discov. 2006 Oct;5(10):821-34. [PubMed:17016423 [Ⓞ](http://www.ncbi.nlm.nih.gov/pubmed/17016423) (http://www.ncbi.nlm.nih.gov/pubmed/17016423)]

10. Low affinity immunoglobulin gamma Fc region receptor II-a (/biodb/polypeptides/P12318)[Details \(/biodb/polypeptides/P12318\)](#)

Kind Protein
Organism Human
Pharmacological action unknown

General Function: Not Available
Specific Function: Binds to the Fc region of immunoglobulins gamma. Low affinity receptor. By binding to IgG it initiates cellular responses against pathogens and soluble antigens. Promotes phagocytosis of opsonized antigens.
Gene Name: FCGR2A
Uniprot ID: P12318 [Ⓞ](http://www.uniprot.org/uniprot/P12318) (http://www.uniprot.org/uniprot/P12318)
Uniprot Name: Low affinity immunoglobulin gamma Fc region receptor II-a
Molecular Weight: 35000.42 Da

References

- Overington JP, Al-Lazikani B, Hopkins AL: How many drug targets are there? Nat Rev Drug Discov. 2006 Dec;5(12):993-6. [PubMed:17139284] (<http://www.ncbi.nlm.nih.gov/pubmed/17139284>)
- Imming P, Sinning C, Meyer A: Drugs, their targets and the nature and number of drug targets. Nat Rev Drug Discov. 2006 Oct;5(10):821-34. [PubMed:17016423] (<http://www.ncbi.nlm.nih.gov/pubmed/17016423>)

11. Low affinity immunoglobulin gamma Fc region receptor II-b (/biodb/polypeptides/P31994)

[Details \(/biodb/polypeptides/P31994\)](#)

Kind Protein
Organism Human
Pharmacological action unknown

General Function: Not Available

Specific Function: Receptor for the Fc region of complexed or aggregated immunoglobulins gamma. Low affinity receptor. Involved in a variety of effector and regulatory functions such as phagocytosis of immune complexes and modulation of antibody production by B-cells. Binding to this receptor results in down-modulation of previous state of cell activation triggered via antigen receptors on B-cells (BCR), T-cells ...

Gene Name: FCGR2B

Uniprot ID: P31994 (<http://www.uniprot.org/uniprot/P31994>)

Uniprot Name: Low affinity immunoglobulin gamma Fc region receptor II-b

Molecular Weight: 34043.355 Da

References

- Overington JP, Al-Lazikani B, Hopkins AL: How many drug targets are there? Nat Rev Drug Discov. 2006 Dec;5(12):993-6. [PubMed:17139284] (<http://www.ncbi.nlm.nih.gov/pubmed/17139284>)
- Imming P, Sinning C, Meyer A: Drugs, their targets and the nature and number of drug targets. Nat Rev Drug Discov. 2006 Oct;5(10):821-34. [PubMed:17016423] (<http://www.ncbi.nlm.nih.gov/pubmed/17016423>)

12. Low affinity immunoglobulin gamma Fc region receptor II-c (/biodb/polypeptides/P31995)

[Details \(/biodb/polypeptides/P31995\)](#)

Kind Protein
Organism Human
Pharmacological action unknown

General Function: Transmembrane signaling receptor activity
Specific Function: Receptor for the Fc region of complexed immunoglobulins gamma. Low affinity receptor. Involved in a variety of effector and regulatory functions such as phagocytosis of immune complexes and modulation of antibody production by B-cells.

Gene Name: FCGR2C
Uniprot ID: P31995 [🔗](http://www.uniprot.org/uniprot/P31995) (http://www.uniprot.org/uniprot/P31995)
Uniprot Name: Low affinity immunoglobulin gamma Fc region receptor II-c
Molecular Weight: 35577.96 Da

References

- Overington JP, Al-Lazikani B, Hopkins AL: How many drug targets are there? Nat Rev Drug Discov. 2006 Dec;5(12):993-6. [PubMed:17139284] [🔗](http://www.ncbi.nlm.nih.gov/pubmed/17139284) (http://www.ncbi.nlm.nih.gov/pubmed/17139284)]
- Imming P, Sinning C, Meyer A: Drugs, their targets and the nature and number of drug targets. Nat Rev Drug Discov. 2006 Oct;5(10):821-34. [PubMed:17016423] [🔗](http://www.ncbi.nlm.nih.gov/pubmed/17016423) (http://www.ncbi.nlm.nih.gov/pubmed/17016423)]

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