MCP SERVER | NO CODE | CLOUD HOSTED

openFDA MCP

Track drug safety and food recalls instantly.

FDA (openFDA) connects your AI agent directly to the public health databases of the U.S. Food and Drug Administration. Search drug labels, monitor adverse event reports for drugs and foods, track medical device recalls, and check for current shortages—all from one place. Skip cross-referencing multiple government websites; get instant data on pharmaceutical safety, food contamination, and medical device compliance.

A+ Quality Score 100/100

drug-labeling | safety-monitoring | regulatory-compliance | medical-devices | recall-tracking

MAINTAINED BY VINKIUS CLOUD FOR AI AGENTS · JUNE 2026
vinkius.com/mcp/fda-openfda

SCAN TO VIEW

The infrastructure that powers AI agents in the real world.

Vinkius connects AI to the world's software through secure, enterprise-grade infrastructure — enabling real-world execution at scale, built on the Model Context Protocol (MCP).

Your AI Connections Run Through Vinkius Cloud

The world's largest managed MCP catalog

Vinkius is the cloud infrastructure where AI agents connect to the software your business already runs. We handle the hosting, the security, the credentials, the uptime — you get agents that actually do things.

We operate the world's largest managed MCP catalog. Major SaaS platforms, CRMs, databases, and cloud providers — running, monitored, production-ready. This MCP server is hosted and maintained by the Vinkius Cloud for AI Agents.

> *The agent doesn't manage credentials, doesn't manage uptime, doesn't manage security. Vinkius does.*
>
> — Architecture principle

Four Pillars of the Vinkius Runtime

01 — Security by design

Credentials stay encrypted at rest via AES-256. The AI agent never touches raw keys — they're injected into a sandboxed V8 isolate at runtime. Actions are logged, and connections have an emergency kill switch.

02 — Built on MCP Fusion

This MCP server was built with **MCP Fusion**, the open-source framework (Apache 2.0) that powers the entire Vinkius catalog. Schema-as-firewall strips undeclared fields, compiled PII redaction runs at zero overhead, and cryptographic lockfiles produce git-diffable audit trails.

03 — Deterministic observability

Eight immutable metrics per endpoint: request volume, p95 latency, error rate, active connections, cost attribution. A live payload feed logs every tool call with mutation detection.

04 — Autonomous operations

Servers are deployed, monitored, and patched autonomously. New capabilities and security patches ship weekly. Zero-downtime deployments ensure continuous availability across all managed MCP servers.

AES-256	Ed25519	24h TTL	V8 Isolate
Encryption at rest	PKI vault signatures	Ephemeral session keys	Sandboxed execution

One Token. Instant Access.

Every MCP server on Vinkius is accessed through a **Connection Token**. Tokens are generated in the cloud dashboard and produce a unique MCP endpoint URL. Paste this URL into any MCP-compatible client — no SDK required.

A single token can serve **multiple AI clients simultaneously**, or you can issue separate tokens per client for granular access control. Each token tracks its own request count, last activity timestamp, and can be individually enabled or revoked.

MCP ENDPOINT

```
https://edge.vinkius.com/{token}/mcp
```

Claude · Cursor · VS Code · Windsurf · Grok · Gemini

Security Is the Architecture

Security in Vinkius is not a feature — it's the foundation of the runtime. The gateway enforces multiple independent protection layers between AI agents and third-party APIs.

01 — Ed25519 PKI Vault

Every workspace has an Ed25519 Master Key. Session keys are generated ephemerally (24h TTL) and signed by the Master Key. Credentials never leave the vault boundary.

02 — V8 Isolate Sandboxing

Tool code runs inside isolated-vm V8 isolates with 64 MB memory caps and per-request timeouts. No filesystem access, no network access except through the SSRF-guarded fetch bridge.

03 — SSRF Guard

All outbound HTTP requests are DNS-resolved and validated before execution. Private IP ranges (10.x, 172.16-31.x, 192.168.x, AWS metadata 169.254.x) are blocked at the network layer.

04 — DLP & PII Redaction

A ResponseGuard pipeline intercepts every tool response. Configurable redaction patterns strip sensitive fields (emails, SSNs, card numbers) before data reaches the AI agent.

05 — Cryptographic Audit Trail

Every request is signed into a SHA-256 hash chain with Ed25519 signatures. Events form a tamper-proof, SIEM-exportable forensic record.

06 — Honeytoken Trap System

Phantom credentials are injected into isolated environments. If a honeytoken is used outside Vinkius infrastructure, the server is quarantined instantly.

Emergency Kill Switch

EU AI Act Art. 14(1) Compliant

The kill switch is an **emergency halt** mechanism — not a simple toggle. When triggered, it executes three actions atomically:

01 — Server deactivated

The MCP server is immediately taken offline across the entire cluster.

02 — All tokens revoked

Every connection token is invalidated. Total lockout — reconnection blocked until new tokens are issued.

03 — WebSocket connections killed

Active connections terminated via Redis pubsub broadcast. Propagates to every runtime node in the cluster.

Full Visibility. Zero Guesswork.

The Vinkius cloud dashboard includes a full MCP Governance suite — real-time analytics and security controls for production AI operations.

Control Plane

KPI dashboard with request volume, latency, success rate, token consumption, and AI-generated operational briefings.

Agent Activity

Which AI clients are connecting, how often, and what they're doing — real-time session tracking.

FinOps

Cost tracking per tool, payload compression savings, budget optimization signals, and consumption trends.

Tool Health

Slowest and most error-prone tools, with actionable root-cause insights and performance baselines.

Firewall & DLP

PII redaction activity, sensitive data protection counters, and security event timeline.

Incident Log

Error trends, failure rates, status-code breakdowns, and forensic audit trail access.

> Get started at **cloud.vinkius.com** — connect your AI agent in under 60 seconds.

FDA (openFDA) MCP

12 tools available
Cloud-hosted on Vinkius

Need to know what's going on with drug labels or public health risks? This MCP connects your AI agent straight into the openFDA database. You can ask it complex questions about everything from approved medications to recent recalls affecting food products. Instead of downloading massive CSV files and spending hours manually cross-referencing government APIs, you just talk to your agent. It handles the deep dives. Need to check if a drug is currently facing shortages? Ask for it. Concerned about a medical device's safety record? Run the query instantly. When you connect this MCP via Vinkius, you get access to thousands of datasets—including detailed information on NDC codes and enforcement actions—without ever building complex manual exports yourself.

Core Capabilities

01 — Monitor Drug Safety

Search for adverse events reported against specific drugs or check official drug labels.

02 — Track Food & Product Recalls

List enforcement reports and adverse event data for contaminated food or recalled medical devices.

03 — Identify Drug Shortages

Get immediate status updates on drugs that are currently unavailable in the market.

04 — Verify Product Classification

Search databases to understand the official classification and approval status of medical devices.

05 — Lookup Drug Codes

Query the National Drug Code (NDC) directory for detailed manufacturer product identifiers.

One Click on Vinkius — From Prompt to Execution

Available at **vinkius.com/mcp/fda-openfda** — connect your AI agent in three steps.

01 First, subscribe to this MCP and optionally input your openFDA API Key in the settings.

02 Next, tell your AI client exactly what you need—for example, 'What were the adverse events for drug X last quarter?'

03 Your agent uses the available tools to query the public databases and returns structured data on drugs, foods, or devices.

The bottom line is: you ask a question in plain English, and this MCP delivers the complex health data answer.

Built For

This connector is for anyone who needs to verify public safety claims or track regulatory compliance. It's perfect for the researcher buried under government reports or the pharma professional who needs quick access to adverse event histories.

Compliance Officer

Monitoring food and drug recall reports across multiple regions to ensure company adherence to federal standards.

Pharmacovigilance Specialist

Running large-scale queries on adverse event data for specific medications or medical devices to identify emerging public health trends.

Healthcare Data Analyst

Pulling structured drug labeling information and NDC codes into a dashboard without manually exporting reports from multiple FDA pages.

What Changes When You Connect

01 Pinpoint product risks immediately. Instead of reading through pages of documents, you can ask the agent to run a query using `search_device_adverse_events` across thousands of reports for medical devices.

02 Stay ahead of supply chain issues. Use `get_drug_shortages` to check if a critical medication is facing current or resolved shortages before drafting a clinical recommendation.

03 Simplify compliance checks. When monitoring recalls, you can use `search_food_enforcement` and `search_drug_enforcement` in one workflow to see where contaminated products are circulating.

04 Deep dive into product details. Get the full picture of any medication by using `search_drug_labels` to pull official FDA labeling data directly into your analysis flow.

05 Streamline identification. Don't waste time guessing a drug's code; use `search_ndc` to look up its exact National Drug Code (NDC) identifier instantly.

Real-World Applications

Investigating an unexpected outbreak.

A public health official notices spikes in sickness cases. They ask their agent, 'What were the adverse events reported for foods consumed in Q1?' The agent runs `search_food_adverse_events` and identifies a specific batch of organic spinach linked to contamination.

Due diligence on new medical equipment.

An engineer needs to vet a piece of industrial machinery. They tell their AI client, 'Check the device classification and any enforcement actions.' The agent runs `search_device_classification` followed by `search_device_enforcement`, giving an instant risk profile.

Researching competitor drug profiles.

A researcher needs to compare two drugs. They prompt the agent, 'Show me the labels and approval status for Drug A vs. Drug B.' The MCP uses `search_drug_labels` and `search_drug_approvals` to pull structured data side-by-side.

Handling a sudden product recall.

A compliance officer needs to know the scope of a food recall. They ask, 'Are there any recent recalls in California?' The agent uses `search_food_enforcement` and provides a list of affected products and regions.

Patterns to Avoid

Searching multiple government sites.

✗ AVOID

Opening the FDA website, then the CDC site, then an industry database. Copying data from one source and pasting it into a spreadsheet for comparison.

✓ INSTEAD

Just ask your agent to compare them. For instance, 'Compare adverse events reported for Drug X using `search_drug_adverse_events` with its official label details via `search_drug_labels`.' It handles the data plumbing.

Forgetting product identifiers.

✗ AVOID

Trying to find a drug's full history but only knowing the brand name. The search returns vague results because it lacks the specific code needed for deep research.

✓ INSTEAD

Always start by running `search_ndc`. This tool ensures you have the exact National Drug Code, which is required for accurate searches like finding approvals using `search_drug_approvals`.

Mixing up device and drug data.

✗ AVOID

Trying to find a medical device's recall history by searching only pharmaceutical databases. The system can’t differentiate between the two categories of products.

✓ INSTEAD

Be specific in your prompt, or use the targeted tools. Use `search_device_enforcement` for equipment recalls and `search_drug_enforcement` for medicine recalls.

The Right Fit

Use this MCP if your core job involves tracking public health risks, regulatory compliance, or product safety verification across multiple domains (drugs, foods, devices). You need the breadth of openFDA data—from adverse events to labeling details and recalls. Don't use this if you only need general industry news or high-level summaries; this tool provides granular, structured government API data. If your task is pure trend analysis without linking it back to a specific regulatory report (like an NDC code lookup), consider using a specialized data modeling MCP instead. However, if the core question involves 'Is X safe?' or 'What happened when Y was recalled?', this is the definitive source you need.

Compliance officers spend hours navigating siloed databases.

Right now, checking product safety means juggling a dozen browser tabs. You visit the FDA site for drug labels, then switch to a food recall database for contamination reports, and maybe open a separate portal just to check medical device enforcement actions. It's copy-pasting data across sheets until your eyes glaze over.

With this MCP, you simply ask: 'What are the current risks associated with product Z?' Your agent pulls everything—drug labels, food recalls, device warnings—and gives you a single, consolidated report. You get answers, not spreadsheets.

openFDA (openFDA) provides comprehensive safety checks.

The biggest time sink vanishes: manually cross-referencing drug codes with recall reports. Previously, you needed the NDC code first, then had to search for labels, and finally check enforcement actions separately.

Now, tell your agent everything at once. It handles the flow from identifying a product using `search_ndc` to confirming its status across multiple data sets in seconds.

openFDA (openFDA) - 12 Tools

Use these twelve tools to query official public health data on drugs, food, and medical devices from the FDA.

#	TOOL	DESCRIPTION
01	`get_drug_shortages`	Checks the current status of drugs that are facing shortages, both active and resolved.
02	`get_usage`	Shows your rate limit and API usage data for monitoring costs.
03	`search_device_adverse_events`	Finds adverse event reports specifically related to medical devices.
04	`search_device_classification`	Looks up the official classification codes for medical devices.
05	`search_device_enforcement`	Retrieves enforcement and recall reports for medical equipment.
06	`search_drug_adverse_events`	Searches the public database for adverse event reports linked to pharmaceuticals.
07	`search_drug_approvals`	Finds FDA-approved brand names and generic drug listings.
08	`search_drug_enforcement`	Lists official recall enforcement reports for pharmaceutical products.
09	`search_drug_labels`	Retrieves the full, official labeling information for FDA drug products.
10	`search_food_adverse_events`	Searches adverse event reports related to food items and consumption.
11	`search_food_enforcement`	Retrieves enforcement and recall reports specifically for contaminated foods.
12	`search_ndc`	Searches the National Drug Code directory using manufacturer identifiers.

See It in Action

Real prompts you can use once this MCP is connected to your AI agent through Vinkius Cloud.

U Search for adverse events reported for Ibuprofen.

Searching drug adverse events... I've retrieved the latest reports. Common reported reactions include nausea and headache. Would you like to see the demographic breakdown of these reports?

U Are there any recent food recalls in New York?

Inspecting food enforcement reports... I found 3 recent recalls affecting New York, including a voluntary recall of organic spinach due to potential contamination. Shall I list the specific product details?

U Show me the label information for Advil.

Retrieving Advil product label... I've found the official FDA labeling. It contains detailed indications, dosage instructions, and warnings. Would you like me to summarize the usage guidelines?

Frequently Asked Questions

01 **How do I check for drug shortages using openFDA (openFDA)?**

You use the `get_drug_shortages` tool. This immediately tells you if a medication is currently short, or if it was previously marked as such, giving you real-time supply chain status.

02 **Can I search for food adverse events with openFDA (openFDA)?**

Yes, use the `search_food_adverse_events` tool. This allows you to pull reports on unusual incidents related to consumed foods, helping track public health risks quickly.

03 **What is the difference between drug and food recalls in openFDA (openFDA)?**

The MCP separates these domains for accuracy. Use `search_drug_enforcement` for pharmaceutical recalls and `search_food_enforcement` for contaminated food products.

04 **How do I find drug labels using openFDA (openFDA)?**

Run the `search_drug_labels` tool. This pulls detailed, official FDA labeling information directly into your workspace, which is much faster than navigating the web portal.

05 **Do I need an API key for openFDA (openFDA)?**

It's optional but recommended. You can input your own openFDA API Key in settings to ensure reliable and continuous access when running complex queries.

Go Live in 60 Seconds

Get your connection token from **cloud.vinkius.com**, then paste the endpoint URL into any MCP-compatible client.

YOUR MCP ENDPOINT

```
https://edge.vinkius.com/[TOKEN]/mcp
```

CLIENT	WHERE TO CONFIGURE
Claude AI	Profile → Customize → Connectors → "+" → Add custom connector → Paste endpoint
Cursor	Settings → Features → MCP Servers → "+ Add New MCP Server" → Type: SSE → Paste endpoint
VS Code	Ctrl/Cmd+Shift+P → "MCP: Add Server" → add `"fda-openfda": { "url": "…" }`
Windsurf	MCP Settings → `mcp_settings.json` → Add endpoint URL
ChatGPT	Settings → Tools & plugins → Add MCP server → Paste endpoint
Gemini	Extensions → Add MCP Server → Paste endpoint URL

ASK AN AI ABOUT THIS

Let your preferred AI explain this MCP server

- Ask ChatGPT
- Ask Claude
- Ask Perplexity
- Ask Gemini
- Ask Grok

READY TO CONNECT

FDA (openFDA) is live on Vinkius Cloud.

Get your connection token, paste it into your AI agent, and start building. No SDK. No deployment. Just results.

Start at cloud.vinkius.com →

vinkius.com · support@vinkius.com

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DOCUMENT INFORMATION

Generated	June 2026
MCP Server	FDA (openFDA) MCP
Server ID	`019d7597-a766-73bc-ac2a-2ab1635e6207`
Platform	Vinkius Cloud for AI Agents
Endpoint	`https://edge.vinkius.com/{token}/mcp`

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